

# **CHAPTER 1**

## **GENERAL PROVISIONS**

### **SECTION 101. Title**

This Decree shall be known as the “National Building Code of the Philippines” and shall hereinafter be referred as the “Code”.

### **SECTION 102. Declaration of Policy**

It is hereby declared to be the policy of the State of safeguard life, health, property, and public welfare, consistent with the principles of sound environmental management and control; and to this end, make it the purpose of this Code to provide for all buildings and structures, a framework of minimum standards and requirements to regulate and control their location, site, design, quality of materials, construction, use occupancy, and maintenance.

### **SECTION 103. Scope and Application**

(a) The provisions of this Code shall apply to the design, location, sitting, construction, alteration, repair, conversion, use, occupancy, maintenance, moving, demolition of, and addition to public and private buildings and structures, except traditional indigenous family dwellings as defined herein.

(b) Buildings and/or structures constructed before the approval of this Code shall not be affected except when alterations, additions, conversions or repairs are to be made therein in which case, this Code shall apply only to portions to be altered, added converted or repaired.

### **SECTION 104. General Building Requirements**

(a) All buildings or structures as well as accessory facilities thereto shall conform in all respects to the principles of safe construction and must be suited to the purpose for which they are designed.

(b) Buildings or structures intended to be used for the manufacture and/or production of any kind of article or product shall observe adequate environmental safeguards.

(c) Buildings or structures and all parts thereof as well as all facilities found therein shall be maintained in safe, sanitary and food working condition.

### **SECTION 105. Site Requirements**

The land or site upon which will be constructed any building or structure, or any ancillary or auxiliary facility thereto, shall be sanitary, hygienic or safe. In case of sites or buildings intended for use as human habitation or abode, the same shall be at a safe distance, as determined by competent authorities, from streams or bodies of water and/or sources of air considered to be polluted; from a volcano or volcanic site and/or any other building considered to be a potential source of fire or explosion.

#### **SECTION 106. Definitions**

As used in this Code, the words, terms and phrases enumerated in Annex “A” hereof shall have the meaning or definition, correspondingly provided therein.

## **CHAPTER 2**

### **ADMINISTRATION AND ENFORCEMENT**

#### **SECTION 201. Responsibility for Administration and Enforcement**

The administration and enforcement of the provisions of this Code including the imposition of the penalties for administrative violations thereof is hereby vested in the Secretary of Public Works, Transportation and Communications, hereinafter referred to as the “Secretary”.

#### **SECTION 202. Technical Staff**

The Secretary is hereby authorized to constitute and provide in his Department a professional staff composed of highly qualified architects, engineers and technicians who possess diversified and professional experience in the field of building design and construction.

#### **SECTION 203. General Powers and Functions of the Secretary under this Code**

For purposes of carrying out the provisions of this Code, the Secretary shall exercise the following general powers and functions:

(1) Formulate policies, plans, standards, and guidelines on building design, construction, use, occupancy and maintenance, in accordance with this Code.

(2) Issue and promulgate policies, plans, standards and guidelines formulated under paragraph 1 of this Section.

(3) Evaluate, review, approve and/or take final action on changes and/or amendments to existing Referral Codes as well as on the incorporation of other referral codes which are not yet expressly made part of this Code.

(4) Prescribe and fix the amount of fees and other charges that the Building Official shall collect in connection with the performance of regulatory functions.

#### **SECTION 204. Professional and Technical Assistance**

The Secretary with the assistance of his technical staff shall provide such professional, technical, scientific and other services including testing laboratories and facilities as may be required to carry out the provisions of this code; Provided that the Secretary may secure such services as he may deem necessary from other agencies of the National Government and may make arrangement for the compensation of such services. He may also engage and compensate within appropriations available therefor, the services of such number of consultants, experts and advisers on full or part-time basis, as may be necessary, coming from the government or private businesses, entities or associations to carry out the provisions of this Code.

#### **SECTION 205. Building Officials**

Except as otherwise provided herein, the Building Official shall be responsible for carrying out the provisions of this Code in the field as well as the enforcement of orders and decisions made pursuant thereto.

Due to the exigencies of the service, the Secretary may designate incumbent Public works District Engineers, City Engineers and Municipal Engineers to act as Building Officials in their respective areas of jurisdiction.

The designation made by the Secretary under this Section shall continue until regular positions of Building Official are provided or unless sooner terminated for causes avoided by law or decree.

#### **SECTION 206. Qualification of Building Officials**

No person shall be appointed as a Building Official unless he possesses the following qualifications:

1. A Filipino citizen and of good moral character.
2. A duly registered architect or civil engineer.
3. A member of good standing of a duly accredited organization of his profession for not less than two years.
4. Has at least five years of diversified and professional experience in building design and construction.

#### **SECTION 207. Duties of a Building Official**

In his respective territorial jurisdiction, the Building Official shall be primarily responsible for the enforcement of the provisions of this Code as well as of the implementing rules and regulations issued therefor. He is the official charged with the duties of issuing building permits.

In the performance of his duties, a Building Official may enter any building or its premises at all reasonable time to inspect and determine compliance with the requirements of this Code, and the terms and conditions provided for in the building permit as issued.

When any building work is found to be contrary to the provisions of this Code, the Building Official may order the work stopped and prescribe the terms and/or conditions when the work will be allowed to resume. Likewise, the Building Official is authorized to order the discontinuance of the occupancy or use of any building or structure or portion thereof found to be occupied or used contrary to the provisions of this Code.

### **SECTION 208. Fees**

Every Building Official shall keep a permanent record and accurate account of all fees and other charges fixed and authorized by the Secretary to be collected and received under this Code.

Subject to existing budgetary, accounting and auditing rules and regulations, the Building Official is hereby authorized to retain not more than twenty percent of his collection for the operating expenses of his office.

The remaining eighty percent shall be deposited with the city or municipal treasurer and shall accrue to the General Fund of the city or municipality concerned.

### **SECTION 209. Exemption**

Public buildings and traditional indigenous family dwellings shall be exempt from payment of building permit fees.

As used in this Code, the term “traditional indigenous family dwelling” means a dwelling intended for the use and occupancy by the family of the owner only and constructed of native materials such as bamboo, nipa, logs, or lumber, the total cost of which does not exceed fifteen thousand pesos.

### **SECTION 210. Use of Income from Fees**

Any provision of law to the contrary notwithstanding, the Secretary is hereby authorized to prescribe the procedures for the use of all net income realized by the office of the Building Official from the collection of fees and charges not exceeding twenty percent thereof in accordance with Section 208.

Such income may be used to cover necessary operating expenses including the purchase of equipment, supplies and materials, travelling expenses, obligation expenses and sheriff’s fees and payment of other prior years’ obligations not adequately funded, subject to existing budgetary and auditing rules and regulations.

### **SECTION 211. Implementing Rules and Regulations**

In the implementation of the provisions of this Code, the Secretary shall formulate necessary rules and regulations and adopt design and construction standards and criteria for buildings and other structures. Such standards, rules and regulations shall take effect after their publication once a week for three consecutive weeks in a newspaper of general circulation.

### **SECTION 212. Administrative Fines**

For the violation of any of the provisions of this Code or any of the rules or regulations issued thereunder, the Secretary is hereby empowered to prescribe and impose fines not exceeding ten thousand pesos.

### **SECTION 213. Penal Provisions**

It shall be unlawful for any person, firm or corporation, to erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equip, use, occupy, or maintain any building or structure or cause the same to be done contrary to or in violation of any provision of this Code.

Any person, firm or corporation who shall violate any of the provisions of this Code and/or commit any act hereby declared to be unlawful shall upon conviction, be punished by a fine of not more than twenty thousand pesos or by imprisonment of not more than two years or by both such fine and imprisonment: Provided, that in the case of a corporation firm, partnership or association, the penalty shall be imposed upon its officials responsible for such violation and in case the guilty party is an alien, he shall immediately be deported after payment of the fine and/or service of his sentence.

### **SECTION 214. Dangerous and Ruinous Buildings or Structures**

Dangerous buildings are those which are herein declared as such or are structurally unsafe or not provided with safe egress, or which constitute a fire hazard, or are otherwise dangerous to human life, or which in relation to existing use, constitute a dilapidation, obsolescence, or abandonment; or which otherwise contribute to the pollution of the site or the community to an intolerable degree.

### **SECTION 215. Abatement of Dangerous Buildings**

When any building or structure is found or declared to be dangerous or ruinous, the Building Official shall order its repair, vacation or demolition depending upon the degree of danger to life, health, or safety. This is without prejudice to further action that may be taken under the provisions of Articles 482 and 694 to 707 of the Civil Code of the Philippines.

### **SECTION 216. Other Remedies**

The rights, actions and remedies provided in this Code shall be in addition to any and all other rights of action and remedies that may be available under existing laws.

## **CHAPTER 3**

### **PERMITS AND INSPECTION**

### **SECTION 301. Building Permits**

No person, firm or corporation, including any agency or instrumentality of the government shall erect, construct, alter, repair, move, convert or demolish any building or structure or cause the same to be done without first obtaining a building permit therefor from the Building Official assigned in the place where the subject building is located or the building work is to be done.

### **SECTION 302. Application for Permits**

In order to obtain building permit, the applicant shall file an application therefor in writing and on the prescribed form with the Office of the Building Official. Every application shall provide at least the following information.

- (1) A description of the work to be covered by the permit applied for.
- (2) Description and ownership of the lot on which the proposed work is to be done as evidenced by TCT and/or copy of the contract of lease over the lot if applicant is not the registered owner;
- (3) The use of occupancy for which the proposed work is intended;
- (4) Estimated cost of the proposed work.

To be submitted together with such application are at least five sets of corresponding plans and specifications prepared, signed and sealed by duly licensed architect or civil engineer in case of architectural plans and structural plans, by a registered mechanical engineer in case of mechanical plans, by a registered electrical engineer in case of electrical plans and by a licensed sanitary engineer or master plumber in case of plumbing or sanitary installation plans except in those cases exempted or not required by the Building Official under this Code.

### **SECTION 303. Processing of Building Permits**

The processing of building permits shall be under the overall administrative control and supervision of the Building Official and his technical staff of qualified professionals.

In processing an application for a building permit, the Building Official shall see to it that the applicant satisfies and conforms with approved standard requirements on zoning and land use, lines and grades, structural design, sanitary and sewerage, environmental health, electrical and mechanical safety as well as with other rules and regulations promulgated in accordance with provisions of this Code.

### **SECTION 304. Issuance of Building Permits**

When satisfied that the work described in an application for building permit and the plans and specifications submitted therewith, conform to the requirements of this Code and other pertinent rules and regulations, the Building Official shall, within fifteen days from payment of the required fees by the applicant, issue the building permit applied for.

The Building Official may issue a permit for the construction of only a part or portion of a building or structure whenever the plans and specifications submitted together with the application do not cover the entire building or structure.

Approved plans and specifications shall not be changed, modified or altered without the approval of the Building Official and the work shall be done strictly in accordance thereto.

### **SECTION 305. Validity of Building Permits**

The issuance of a building permit shall not be construed as an approval or authorization to the permittee to disregard or violate any of the provisions of this Code.

Whenever the issuance of a permit is based on approved plans and specifications which are subsequently found defective, the Building Official is not precluded from requiring permittee to effect the necessary corrections in said plans and specifications or from preventing or ordering the stoppage of any or all building operations being carried on thereunder which are in violation of this Code.

### **SECTION 306. Non-Issuance, Suspension or Revocation of Building Permits**

The Building Official may order or cause the non-issuance, suspension or revocation of building permits on any or all of the following reasons or grounds:

- (a) Errors found in the plans and specifications;
- (b) Incorrect or inaccurate data or information supplied;
- (c) Non-compliance with the provisions of this Code or of any rule or regulation.

Notice of non-issuance, suspension or revocation of building permits shall always be made in writing, stating the reason or grounds therefor.

### **SECTION 307. Appeal**

Within fifteen {15} days from the date of receipt of advice of the non-issuance, suspension or revocation of permits, the applicant/permittee may file an appeal with the Secretary who shall render his decision within fifteen days from date of receipt of notice of appeal. The decision of the Secretary shall be final subject only to review by the office of the President.

### **SECTION 308. Inspection and Supervision of Work**

The owner of the Building who is issued or granted a building permit under this Code shall engage the services of a duly licensed architect or civil engineer to undertake the full time inspection and supervision of the construction work.

Such architect or civil engineer may or may not be the same architect or civil engineer who is responsible for the design of the building.

It is understood however that in either case, the designing architect or civil engineer is not precluded from conducting inspection of the construction work to check and determine compliance with the plans and specifications of the building as submitted.

There shall be kept at the jobsite at all times a logbook wherein the actual progress of construction including tests conducted, weather conditions and other pertinent data are to be recorded.

Upon completion of the construction, the said licensed architect or civil engineer shall submit the logbook, duly signed and sealed, to the Building Official. He shall also prepare and submit a Certificate

of Completion of the project stating that the construction of building conforms to the provisions of this Code as well as with the approved plans and specifications.

### **SECTION 309. Certificate of Occupancy**

No building or structure shall be used or occupied and no change in the existing use or occupancy classification of a building structure or portion thereof shall be made until the Building Official has issued a Certificate of Occupancy therefor as provided in this Code.

A Certificate of Occupancy shall be issued by the Building Official within thirty (30) days if after final inspection and submittal of a Certificate of Completion referred to in the preceding section, it is found that the building or structure complies with the provisions of this Code.

The Certificate of Occupancy shall be posted or displayed in a conspicuous place on the premises and shall not be removed except upon order of the Building Official.

The non-issuance, suspension and revocation of Certificates of Occupancy and the procedure for appeal therefrom shall be governed in so far as applicable, by the provisions of Section 306 and 307 of this Code.

## **CHAPTER 4**

### **TYPES OF CONSTRUCTION**

#### **SECTION 401. Types of Construction**

For purposes of this Code, all buildings proposed for construction shall be classified or identified according to the following types:

(1) Type I - Type I buildings shall be of wood construction. The structural elements may be any of the materials permitted by this Code.

(2) Type II - Type II buildings shall be of wood construction with protective fire-resistant materials and one-hour fire-resistive throughout; Except, that permanent non-bearing partitions may use fire-retardant treated wood within the framing assembly.

(3) Type III - Type III buildings shall be of masonry and wood construction. Structural elements may be any of the materials permitted by this Code: Provided, that the building shall be one-hour fire-resistive throughout. Exterior walls shall be of incombustible fire-resistive construction.

(4) Type IV - Type IV buildings shall be of steel, iron, concrete, or masonry construction. Walls, ceilings, and permanent partitions shall be of incombustible fire-resistive construction: Except, that permanent non-bearing partitions of one-hour fire-resistive construction may use fire-retardant treated wood within the framing assembly.

(5) Type V - Type V buildings shall be fire-resistive. The structural elements shall be of steel, iron concrete, or masonry construction. Walls, ceilings, and permanent partitions shall be of incombustible fire-resistive construction.

#### **SECTION 402. Changes in Types**

No change shall be made in the type of construction of any building which would place the building in a different sub-type or type of construction unless such building is made to comply with the requirements for such sub-type of construction: Except, when the changes is approved by the Building Official upon showing that the new or proposed the changes is approved by the Building Official upon showing that the new or proposed construction is less hazardous, based on life and fire risk, than the existing construction.

#### **SECTION 403. Requirements on Type of Construction**

Subject to the provisions of this Chapter, the Secretary shall prescribed standards for each type of construction, and promulgate rules and regulations therefor, relating to structural framework, exterior walls and openings, interior walls and enclosures, floors, exits and stairs construction, and roofs.

## **CHAPTER 5**

### **REQUIREMENTS FOR FIRE ZONES**

#### **SECTION 501. Fire Zones Defined**

Fire zones are areas within which only certain types of buildings are permitted to be constructed based on their use or occupancy, type of construction, and resistance to fire.

#### **SECTION 502. Buildings located in more than One Fire Zone**

A building or structure which is located partly in one fire zone and partly in another shall be considered to be in the more highly restrictive fire zone, when more than one-third of its total floor area is located in such zone.

#### **SECTION 503. Moved Building**

Any building or structure moved within or into any fire zone shall be made to comply with all the requirements for buildings in that fire zone.

#### **SECTION 504. Temporary Buildings**

Temporary buildings such as reviewing stands and other miscellaneous structures conforming to the requirements of this Code, and sheds, canopies and fences used for the protection of the public around and in conjunction with construction work, may be erected in the fire zones by special permit from the Building Official for a limited period of time, and such buildings or structures shall be completely removed upon the expiration of the time limit stated in such permits.

#### **SECTION 505. Center Lines of Streets**

For the purpose of this Chapter, the center line of an adjoining street or alley may be considered and adjacent property line. Distances shall be measured at right angles to the street or alley.

#### **SECTION 506. Restrictions on Existing Buildings**

Existing buildings or structures in fire zones that do not comply with the requirements for a new building erected therein shall not hereafter be enlarged, altered, remodeled, repaired or moved except as follows:

(a) Such building is entirely demolished;

(b) Such building is to be moved outside the limits of the more highly restrictive Fire Zone to a zone where the building meets the minimum standards;

(c) Changes, alterations and repairs may be made provided that in any 12-month period, the value of the work does not exceed twenty percent of the value of the existing building, and provided that, such changes do not add additional combustible material, and do not, in the opinion of the Building Official, increase the fire hazard;

(d) Additions thereto are separated from the existing building by fire walls, as setforth in Sub-section 604 (b);

(e) Damage from fire or earthquake, typhoons or any fortuitous event may be repaired, using the same kind of materials of which the building or structure was originally constructed, provided that, the cost of such repair shall not exceed twenty percent of the replacement cost of the building or structure.

#### **SECTION 507. Designation of Fire Zones**

The Secretary shall promulgate specific restrictions for each type of Fire Zone. Cities and municipalities shall be divided into such Fire Zones in accordance with local, physical, spatial framework plans submitted by city or municipal planning and/or development bodies.

## **CHAPTER 6**

### **FIRE-RESISTIVE REQUIREMENTS IN CONSTRUCTION**

## **SECTION 601. Fire-Resistive Rating defined**

Fire resistive rating means the degree to which a material can withstand fire as determined by generally recognized and accepted testing methods.

## **SECTION 602. Fire-Resistive Time Period Rating**

Fire-resistive time period rating is the length of time a material can withstand being burned which may be on-hour, two-hours, three-hours, four-hours, etc.

## **SECTION 603. Fire-Resistive Standards**

All materials of construction, and assemblies or combinations thereof shall be classified according to their fire-retardant or flame-spread ratings as determined by general accepted testing methods an/or by the Secretary.

## **SECTION 604. Fire-Resistive Regulations**

The Secretary shall prescribe standards and promulgate rules and regulations on the testing of construction materials for flame-spread characteristics, tests on fire damages, fire tests of building construction and materials, door assemblies and tinclad fire doors and window assemblies, the installation of fire doors and windows and smoke and fire detectors for fire protective signaling system, application and use of controlled interior finish, fire-resistive protection for structural members, fire-resistive walls and partitions, fire-resistive floor or roof ceiling, fire-resistive assemblies for protection of openings and fire-retardant roof coverings.

# **CHAPTER 7**

## **CLASSIFICATION AND GENERAL REQUIREMENT OF ALL BUILDINGS BY USE OR OCCUPANCY**

### **SECTION 701. Occupancy Classified**

(a) Buildings proposed for construction shall be identified according to their use or the character of its occupancy and shall be classified as follows:

(1) Group A - Residential Dwellings

Group A Occupancies shall be dwellings.

(2) Group B - Residentials, Hotels and Apartments

Group B Occupancies shall be multiple dwelling units including boarding or lodging, houses, hotels, apartment buildings, row houses, convents, monasteries and other similar building each of which accommodates more than 10 persons.

(3) Group C - Education and Recreation

Group C Occupancies shall be buildings used for school or day-care purposes, involving assemblage for instruction, education, or recreation, and not classified in Group 1 or in Division 1 and 2 or Group H Occupancies.

(4) Group D – Institutional

Group D Occupancies shall include:

Division 1 - Mental hospitals, mental sanitarium, jails, prison, reformatories, and buildings where personal liberties of inmates are similarly restrained.

Division 2 - Nurseries for full-time care of children under kindergarten age, hospitals, sanitarium, nursing homes with non-ambulatory patients, and similar building each accommodating more than five persons.

Division 3 - Nursing homes for ambulatory patients, homes for children of kindergarten age or over, each accommodating more than five person: Provided , that Group D Occupancies shall not include building used only for private or family group dwelling purposes.

(5) Group E - Business and Mercantile

Division 1 - Gasoline filling and service stations, storage garages and boat storage structures where no work is done except exchange of parts and maintenance requiring no open flame, welding, or the use of highly flammable liquids.

Division 2 - Wholesale and retail stores, office buildings, drinking and dining establishments having an occupant load of less than one hundred persons, printing plants, police and fire stations, factories and workshops using not highly flammable or combustible materials and paint stores without bulk handlings.

Division 3 - Aircraft hangers and open parking garages where no repair work is done except exchange of parts and maintenance requiring no open flame, welding or the use of highly flammable liquids.

(6) Group F – Industrial

Group F Occupancies shall included: ice plants, power plants, pumping plants, cold storage, and creameries, factories and workshops using incombustible and non-explosive materials, and storage and sales rooms for incombustible and non-explosive materials.

(7) Group G - Storage and Hazardous

Group G Occupancies shall include:

Division 1 – Storage and handling of hazardous and highly flammable material.

Division 2 – Storage and handling of flammable materials, dry cleaning plants using flammable liquids; paint stores with bulk handling, paint shops and spray painting rooms.

Division 3 - Wood working establishments, planing mills and box factories, shops, factories where loose combustible fibers or dust are manufactured, processed or generated; warehouses where highly combustible material is stored.

Division 4 - repair garages.

Division 5 - Aircraft repair hangars.

(8) Group H - Assembly Other than Group 1

Group H Occupancies shall include:

Division 1 - Any assembly building with a stage and an occupant load of less than 1000 in the building.

Division 2 - Any assembly building without stage and having an occupant load of 300 or more in the building.

Division 3 - Any assembly building without a stage and having an occupant load of less than 300 in the building.

Division 4 - Stadia, reviewing stands, amusement park structures not included within Group 1 or in division 1, 2, and 3 of this Group.

(9) Group 1 - Assembly Occupant Load 1000 or More

Group 1 Occupancies shall be any assembly building with a stage and an occupant load of 1000 or more in the building.

(10) Group J – Accessory

Group J Occupancies shall included:

Division 1 - Private garage, carports, sheds and agricultural buildings.

Division 2 - Fences over 1.80 meters high, tanks, and towers.

(b) Other subgroupings or divisions within Groups A to J may be determined by the Secretary. Any other occupancy not mention specifically in this Section, or about which there is any question, shall

be included in the Group which it most nearly resembles based on the existing or proposed life and fire hazard.

## **SECTION 702. Change in Use**

No change shall be made in the character of occupancy or use of any building which would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of this Code for such division or group of occupancy or in different group of occupancies, unless such building is made to comply with the requirements of this Code for such division or group of occupancy. The character of occupancy of existing buildings may be changed subject to the approval of the Building Official and the building may be occupied for purposes set forth in other Groups: Provided the new proposed use is less hazardous, based on life and fire risk, than the existing use.

## **SECTION 703. Mixed Occupancy**

### **(a) General Requirements**

When a building is of mixed occupancy or used for more than one occupancy, the whole building shall be subject to the most restrictive requirement pertaining to any of the type of occupancy found therein except in the following:

(1) When a one-storey building houses more than one occupancy, each portion of the building shall conform to the requirement of the particular occupancy housed therein and;

(2) Where minor accessory uses do not occupy more than ten percent of the area of any floor or a building, nor more than ten percent of the basic area permitted in the occupancy requirements, in which case, the major use of the building shall determine the occupancy classification.

### **(b) Forms of Occupancy Separation**

Occupancy separations shall be vertical or horizontal or both, or when necessary, of such other forms as may be required to afford a complete separation between the various occupancy divisions in the building.

### **(c) Types of Occupancy Separation**

Occupancy separation shall be classified as “One-Hour Fire Resistant”, “Two-Hour Fire-Resistant”, “Three-Hour Fire-Resistant” and “Four-Hour Fire-Resistant.”

(1) A “One-Hour Fire Resistant Occupancy Separation” shall be of not less than three-hour fire-resistant construction. All openings in such separation shall be protected by a fire-assembly having a one-hour fire-resistant rating.

(2) A “Two-Hour Fire Resistant Occupancy Separation” shall be of not less than two-hour fire-resistant construction. All openings in such separation shall be protected by a fire assembly having a two-hour fire-resistant rating.

(3) A “Three-Hour Fire-Resistive Occupancy Separation” shall be of not less than three-hour fire-resistive construction. All openings walls forming such separation shall be protected by a fire assembly having a three-hour fire-resistive rating. The total width of all openings in any three-hour fire-resistive occupancy separation wall in any one-storey shall not exceed 25 percent of the length of the wall in that storey and no single opening shall have an area greater than 10.00 square meters. all openings in floors forming a “Three-Hour Fire-Resistive Occupancy Separation” shall be protected by vertical enclosures extending above and below such openings. The walls of such vertical enclosures shall be of not less than two-hour fire-resistive construction, and all openings therein shall be protected by a fire assembly having a three hour fire-resistive rating.

(4) A “Four-Hour Fire-Resistive Occupancy Separation” shall have no openings therein and shall be of not less than four-hour fire-resistive construction.

(d) Fire Rating for Occupancy Separation

Occupancy Separations shall be provided between groups, subgroupings, or divisions of occupancies. The Secretary shall promulgate rules and regulations for appropriate occupancy separations in buildings of mixed occupancy; Provided, that, where any occupancy separation is required, the minimum shall be a “One-Hour Fire-Resistive Occupancy Separation”; and where the occupancy separation is horizontal, structural members supporting the separation shall be protected by an equivalent fire-resistive construction.

**SECTION 704. Location on Property**

(a) General

No building shall be constructed unless it adjoins or has direct access to a public space, yard or street on at least one of its sides.

For the purpose of this Section, the centerline of an adjoining street or alley shall be considered an adjacent property line.

Eaves over required windows shall not less than 750 millimeters from the side and rear property lines.

(b) Fire Resistance of Walls

Exterior walls shall have fire resistance and opening protection in accordance with the requirements set forth by the Secretary. Projections beyond the exterior wall shall not exceed beyond a point one-third the distance from an assumed vertical plane located where the fire-resistive protection of openings is first required to the location on property whichever is the least restrictive. Distance shall be measured at right angles from the property line. When openings in exterior walls are required to be protected due to distance from property line, the sum of the areas of such openings in any storey shall not exceed 50 percent of the total area of the wall in that storey.

(c) Buildings on Same Property and Buildings Containing Courts

For the purpose of determining the required wall and opening protection, buildings on the same property and court walls shall be assumed property line from the existing building shall be the distance to the property line for each occupancy as set forth by the Secretary: Provided, that two or more

buildings on the same property may be considered as one building if the aggregate area of such building is within the limits of allowable floor areas for a single building, and when the buildings so considered, house different occupancies or are of different types of construction, the area shall be that allowed for the most restrictive occupancy or construction.

#### **SECTION 705. Allowable Floor Areas**

The allowable floor areas for one-storey building and buildings over one-storey shall not exceed the limits prescribed by the Secretary for each occupancy groups and/or types of construction.

For purposes of this Section, each portion of a building separated by one or more area separation walls may be considered a separate building provided the area separation walls meet the requirements prescribed therefor by the Secretary.

#### **SECTION 706. Allowable Floor Area Increases**

The floor areas hereinabove provided may be increased in certain specific instances and under appropriate conditions, based on the existence of public space, streets or yards extending along and adjoining two or more sides of the building or structure subject to the approval of the Building Official.

#### **SECTION 707. Maximum height of Buidligns**

The maximum height and number of storeys of every building shall be dependent upon the character of occupancy and the type of construction as determined by the Secretary considering population density, building bulk, widths of streets and car parking requirements. The height shall be measured from the highest adjoining sidewalk or ground surface: Provided, that the height measured from the lowest adjoining surface shall not exceed such maximum height by more than 3.00 meters: Except, that towers, spires, and steeples, erected as part of a building and not used for habitation or storage are limited as to height only by structural design if completely of incombustible materials, or may extend not to exceed 6.00 meters above the height limits for each occupancy group if of combustible materials.

#### **SECTION 708. Minimum Requirements for Group Dwellings**

##### **(a) Dwelling Location and Lot Occupancy**

The dwelling shall occupy not more than ninety percent of a corner lot and eighty percent of an inside lot, and subject to the provisions on Easements of Light and View of the Civil Code of Philippines, shall be at least 2 meters from the property line.

##### **(b) Light and Ventilation**

Every dwelling shall be so constructed and arranged as to provide adequate light and ventilation as provided under Section 805 to Section 811, of this Code.

##### **(c) Sanitation**

Every dwelling shall be provided with at least one sanitary toilet and adequate washing and drainage facilities.

(d) Foundation

Footings shall be of sufficient size and strength to support the load of the dwelling and shall be at least 250 millimeters thick and 600 millimeters below the surface of the ground.

(e) Post

The dimensions of wooden posts shall be those found in Table 708-A: Dimensions of Wooden Posts (Annex B-1). Each post shall be anchored to such footing by straps and bolts of adequate size.

(f) Floor

The live load of the first floor shall be at least 200 kilograms per square meter and for the second floor, at least 150 kilograms per square meter.

(g) Roof

The wind load for roofs shall be at least 120 kilograms per square meter for vertical projection.

(h) Stairs

Stairs shall be at least 750 millimeters in clear width, with a rise of 200 millimeters and a minimum run of 200 millimeters.

(i) Entrance and Exit

There shall be at least one entrance and another one for exit.

(j) Electrical Requirements

All electrical installation shall conform to the requirements of the Philippine Electrical Code.

(k) Mechanical Requirements

Mechanical systems and/or equipment installation shall be subject to the requirement of the Philippine Mechanical Engineering Code.

**SECTION 709. Requirements for Other Group Occupancies**

Subject to the provisions of this Code, the Secretary shall promulgate rules and regulations for each of the other Group Occupancies covering: allowable construction height, and area; location on property, exit facilities, light, ventilation, and sanitation; enclosures of vertical openings; fire extinguishing systems; and special hazards.

**CHAPTER 8**

## **LIGHT AND VENTILATION**

### **SECTION 801. General Requirements of Light and Ventilation**

(a) Subject to the provisions of the Civil Code of the Philippines on Easements of Light and View, and to the provisions of this part of the Code, every building shall be designed, constructed, and equipped to provide adequate light and ventilation.

(b) All buildings shall face a street or public alley or a private street which has been duly approved.

(c) No buildings shall be altered nor arranged so as to reduce the size of any room or the relative area of windows to less than that provided for buildings under this Code, or to create an additional room, unless such additional room conforms to the requirements of this Code.

(d) No building shall be enlarged so that the dimensions of the required court or yard would be less than that prescribed for such building.

### **SECTION 802. Measurement of Site Occupancy**

(a) The measurement of site occupancy or lot occupancy shall be taken at the ground level and shall be exclusive of courts, yards, and light wells.

(b) Courts, yards, and light wells shall be measured clear of all projections from the walls enclosing such wells or yards with the exception of roof leaders, wall copings, sill, or steel fire escapes not exceeding 1.20 meters in width.

### **SECTION 803. Percentage of Site Occupancy**

(a) Maximum site occupancy shall be governed by the use, type of construction, and height of the building and the use, area, nature, and location of the site; and subject to the provisions of the local zoning requirements and in accordance with the rules and regulations promulgated by the Secretary.

### **SECTION 804. Size and Dimensions of Courts**

(a) Minimum size of courts and their least dimensions shall be governed by the use, type of construction, and height of the building as provided in the rules and regulations promulgated by the Secretary, provided that the minimum horizontal dimension of court shall be not less than 2.00 meters.

(b) All inner courts shall be connected to a street or yard, either by a passageway with a minimum width of 1.20 meters or by a door through a room or rooms.

### **SECTION 805. Ceiling Heights**

(a) Habitable rooms provided with artificial ventilation shall have ceiling heights not less than 2.40 meters measured from the floor to the ceiling; Provided that for buildings of more than one-storey, the minimum ceiling height of the first storey shall be 2.70 meters and that for the second storey 2.40

meters and succeeding storeys shall have an unobstructed typical head-room clearance of not less than 2.10 meters above the finished floor. Above stated rooms with a natural ventilation shall have ceiling heights not less than 2.70 meters.

(b) Mezzanine floors shall have clear ceiling height not less than 1.80 meters above and below it.

#### **SECTION 806. Size and Dimension of Rooms**

(a) Minimum sizes of rooms and their least horizontal dimensions shall be as follows:

1. Rooms for Human Habitations - 6.00 square meters with a least dimension follows:
2. Kitchens - 3.00 square meters with a least dimension of 1.50 meters;
3. Bath and toilet - 1.20 square meters with a least dimension of 0.90 meter.

#### **SECTION 807. Air Space Requirements in Determining the Size of Rooms**

(a) School Rooms - 3.00 cubic meters with 1.00 square meter of floor area per person;

1. School Rooms - 3.00 cubic meter with 1.00 square meter of floor area per person;
2. Workshops, Factories, and Offices - 12.00 cubic meters of air space per person;
3. Habitable rooms - 14.00 cubic meters of air space per person.

#### **SECTION 808. Window Openings**

(a) Every room intended for any use, not provided with artificial ventilation system as herein specified in this Code, shall be provided with a window or windows with a total free area of openings equal to at least ten percent of the floor area of room, and such window shall open directly to a court, yard, public street or alley, or open water courses.

#### **SECTION 809. Vent Shafts**

(a) Ventilation or vent shafts shall have a horizontal cross-sectional area of not less 0.10 square meter for every meter of height of shaft but in no case shall the area be less than 1.00 square meter. No vent shaft shall have its least dimension less than 600 millimeters.

(b) Skylights - Unless open to the outer air at the top for its full area, vent shaft shall be covered by a skylight having a net free area or fixed louver openings equal to the maximum required shaft area.

(c) Air ducts shall open to a street or court by a horizontal duct or intake at a point below the lowest window opening. Such duct or intake shall have a minimum unobstructed cross-sectional area of not less than 0.30 square meter with a minimum dimension of 300 millimeters. The openings to the duct or intake shall be not less than 300 millimeters above the bottom of the shaft and the street surface or level of court, at the respective ends of the duct or intake.

## **SECTION 810. Ventilation Skylights**

(a) Skylights shall have a glass area not less than that required for the windows that are replaced. They shall be equipped with movable sashes or louvers with an aggregate net free area not less than that required for openable parts in the window that are replaced or provided with approved artificial ventilation of equivalent effectiveness.

## **SECTION 811. Artificial Ventilation**

(a) Rooms or spaces housing industrial or heating equipment shall be provided with artificial means of ventilation to prevent excessive accumulation of hot and/or polluted air.

(b) Whenever artificial ventilation is required, the equipment shall be designed and constructed to meet the following minimum requirements in air changes:

1. For rooms entirely above grade and used for office, clerical, or administrative purposes,  
or  
as stores, sales rooms, restaurants, markets, factories, workshops, or machinery rooms,  
not  
less than three changes of air per hour shall be provided.
2. For rooms entirely above grade and used as bakeries, hotel or restaurant kitchens, laundries other than accessory to dwellings, and boiler rooms - not less than ten changes of air per hour shall be provided.
3. For auditorium and other rooms used for assembly purposes, with seats or other  
accommo-  
dations - not less than 0.30 cubic meter of air per minute shall be supplied for each  
person.
4. For wards and dormitories of institutional buildings - not less than 0.45 cubic meter of air per minute shall be supplied for each person accommodated.
5. For other rooms or spaces not specifically covered under this Section of the Code,  
applicable  
provisions of the Philippine Mechanical Engineering Code, shall be followed.

# **CHAPTER 9**

## **SANITATION**

## **SECTION 901. General Requirements**

Subject to the provisions of Book II of the civil Code of the Philippines on Property, Ownership, and its Modification, all buildings hereafter erected, altered, remodeled, relocated or repaired for human habitation shall be provided with adequate and potable water supply, plumbing installation, and suitable wastewater treatment or disposal system, storm water drainage, pest and vermin control, noise abatement device, and such other measures required for the protection and promotion of health of persons occupying the premises and others living nearby.

## **SECTION 902. Water Supply System**

(a) Whenever available, the potable water requirements for a building used for human habitation shall be supplied from existing municipal or city waterworks system.

(b) The quality of drinking water from meteoric, surface or underground sources shall conform to the criteria set in the latest approved National Standards for Drinking Water.

(c) The design, construction and operation of deepwells for the abstraction of groundwater shall be subject to the provisions of the Water Code of the Philippines.

(d) The design, construction and operation of independent waterworks systems of private housing subdivisions or industrial estates shall be governed by existing laws relating to local waterworks system.

(e) The water piping installations inside buildings and premises shall conform to the provisions of the National Plumbing Code of the Philippines.

## **SECTION 903. Wastewater Disposal System**

(a) Sanitary sewage from buildings and neutralized or pre-heated industrial wastewater shall be discharged directly into the nearest street sanitary sewer main of existing municipal or city sanitary sewerage system in accordance with the criteria set by the Code on Sanitation and the National Pollution Control Commission.

(b) All buildings located in areas where there are no available sanitary sewerage system shall dispose their sewage "Imhoff" or septic tank and subsurface absorption field .

(c) Sanitary and industrial plumbing installations inside buildings and premises shall conform to the provisions of the National Plumbing Code.

## **SECTION 904. Storm Drainage System**

(a) Rainwater drainage shall not discharge to the sanitary sewer system.

(b) Adequate provisions shall be made to drain low areas in buildings and their premises.

## **SECTION 905. Pest and Vermin Control**

(a) All buildings with hollow and/or wood construction shall be provided with rat proofing.

(b) Garbage bins and receptacles shall be provided with ready means for cleaning and with positive protection against entry of pest and vermins.

(c) Dining rooms for public use without artificial ventilation shall be properly screened.

#### **SECTION 906. Noise Pollution Control**

Industrial establishments shall be provided with positive noise abatement devices to tone down the noise level of equipment and machineries to acceptable limits set down by the Department of Labor and the National Pollution Control Commission.

#### **SECTION 907. Pipe Materials**

All pipe materials to be used in buildings shall conform to the Standard Specifications of the Philippine Standard Council.

## **CHAPTER 10**

### **BUILDING PROJECTION OVER PUBLIC STREETS**

#### **SECTION 1001. General Requirements**

(a) No part of any building or structure or any of its appendages shall project beyond the property line of the building site, except as provided in this Code.

(b) The projection of any structure or appendage over a public property shall be the distance measured horizontally from the property line to the outermost point of the projection.

#### **SECTION 1002. Projection into Alleys or Streets**

(a) No part of any structure or its appendage shall project into any alley or street, national road or public highway except as provided in this Code.

(b) Footings located at least 2.40 meters below grade along national roads or public highway may project not more than 300 millimeters beyond the property line.

(c) Foundations may be permitted to encroach into public sidewalk areas to a width not exceeding 500 millimeters; provided, that the top of the said foundations is not less than 600 millimeters below the established grade; and provided further, that said projection does not obstruct any existing

utility such as power, communication, gas, water, or sewer lines, unless the owner concerned shall pay the corresponding entities for the rerouting of the parts of the affected utilities.

### **SECTION 1003. Projection of Balconies and Appendages Over Streets**

(a) The extent of any projection over an alley or street shall be uniform within block and shall conform to the limitations set forth in Table 1003-A; Projection of Balconies and Appendages (Annex B-2)

(b) The clearance between the established grade of the street and/or sidewalk and the lowest under surface of any part of the balcony shall not be less than 3.00 meters.

### **SECTION 1004. Arcades**

(a) Whenever required by existing building and zoning regulations, arcades shall be constructed on sidewalks of streets. The width of the arcade and its height shall be uniform throughout the street provided, that in no case, shall an arcade be less than 3.00 meters above the established sidewalk grade.

### **SECTION 1005. Canopies (Marquees)**

(a) *Definition:* A canopy or marquee is a permanent roofed structure above a door attached to and supported by the building and projecting over a wall or sidewalk. This includes any object or decoration attached thereto.

(b) *Projection and Clearance.* The horizontal clearance between the outermost edge of the marquee and the curb line shall be not less than 300 millimeters. The vertical clearance between the pavement or ground line and the undersurface of any part the marquee shall not be less than 3.00 meters.

(c) *Construction.* A marquee shall be constructed of incombustible material or materials of not less than two-hours fire-resistive construction. It shall be provided with necessary drainage facility.

(d) *Location.* Every marquee shall be so located as not to interfere with the operation of any exterior standpipe connection or to obstruct the clear passage from stairway exits from the building or the installation or maintenance of electroliers.

### **SECTION 1006. Movable Awnings or Hoods**

(a) *Definition.* An awning is a movable shelter supported entirely from an exterior wall of a building and of a type which can be retracted, folded, or collapsed against the face of a supporting building.

(b) *Projection and Clearance.* The horizontal clearance between the outermost edge of the marquee and the curb line shall be not less than 300 millimeters. The vertical clearance between the undermost surface of the awning and the pavement or ground line shall be not less than 2.40 meters. Collapsible awnings shall be so designated that they shall not block a required exit when collapsed or folded.

### **SECTION 1007. Doors, Windows, and the like**

Doors, windows, and the like less than 2.40 meters above the pavement or groundline shall not, when fully opened or upon opening, project beyond the property line except fire exit doors.

#### **SECTION 1008. Corner Buildings with Chafans**

(a) Every corner building or solid fence on a public street or alley less than 3.60 meters in width shall be truncated at the corner. The face of the triangle so formed shall be at right angles to the bisector of the angle of the intersection of the street lines; provided, that in no case, the Secretary shall determine the size and form of the chaflan.

(b) If the building is arcaded, no chaflan is required notwithstanding the width of the public street or alley, less than 12.00 meters.

## **CHAPTER 11**

### **PROTECTION OF PEDESTRIANS DURING CONSTRUCTION DEMOLITION**

#### **SECTION 1101. General Requirements**

(a) No person shall use or occupy a street, alley or public sidewalk for the performance of work covered by a building permit except in accordance with the provisions of this Chapter.

(b) No person shall perform any work on any building or structure adjacent to a public way in general use for pedestrian travel, unless the pedestrians are protected as specified in this Chapter.

(c) Any material or structure temporarily occupying public property, including fence, canopies, and walkways, shall be adequately lighted, between sunset and sunrise.

#### **SECTION 1102. Storage in Public Property**

Materials and equipment necessary for work to be done under a permit when placed or stored on public property shall not obstruct free and convenient approach to and use of any fire hydrant, fire or police alarm box, utility box, catch basin, or manhole and shall not interfere with any drainage of any street or alley gutter.

#### **SECTION 1103. Mixing Mortar on Public Property**

The mixing of mortar, concrete, or similar materials on public streets shall not be allowed.

#### **SECTION 1104. Protection of Utilities**

All public or private utilities above or below the ground shall be protected from any damage by any work being done under the permit. The protection shall be maintained while such work is being done and shall not obstruct the normal functioning of any such utility.

### **SECTION 1105. Walkway**

(a) When the Building Official authorizes a sidewalk to be fenced or closed, or in case there is no sidewalk in front of the building site during construction or demolition, a temporary walkway of not less than 1.20 meters wide shall be provided.

(b) The walkway shall be capable of supporting a uniform live load of 650 kilograms per square meter. A durable wearing surface shall be provided throughout the construction period.

### **SECTION 1106. Pedestrian Protection**

(a) Protection Required. Pedestrian traffic shall be protected by a railing on the street side when the walkway extends into the roadway, by a railing when adjacent to excavation, and by such as set forth in Table 1106-A: Type of Protection Required for Pedestrians (Annex B-2).

(b) Railings. Adequate railings when required shall be built substantially strong and should be at least 1.00 meter in height.

(c) Fences. Fences shall be built of an approved material, not less than 2.40 meters in height above grade, and be placed on the side of the walkway nearest to the building site. Fences shall enclose entirely the building site. Openings in such fences shall be provided with doors which shall be kept closed at all times.

(d) Canopies. The protective canopy shall have a clear height of 2.40 meters above the railway, and shall be structurally safe. Every canopy shall have a solid fence built along its entire length on the construction side. If materials are stored or work is done on top of the canopy, the edge along the street shall be protected by a tight curb board not less than 300 millimeters high and a railing not less than 1.00 meter high shall be provided. The entire structure shall be designed to carry the loads imposed upon it: Provided, that the live load shall be not less than 600 kilograms per square meter.

### **SECTION 1107. Maintenance and Removal of Protective Devices**

(a) Maintenance. All protective devices shall be properly maintained in place and kept in good order for the entire length of time pedestrians may be endangered.

(b) Removal. Every protective fence or canopy shall be removed within 30 days after such protection is no longer required as determined by the Building Official.

### **SECTION 1108. Demolition**

(a) The work of demolishing any building shall not be commenced until all the necessary pedestrian protective structures are in place.

(b) The Building Official may require the permittee to submit plans, specifications and complete schedule of demolition. Whenso required, no work shall be done until such plans, specifications and schedule are approved by the Building Official.

## **CHAPTER 12**

### **GENERAL DESIGN AND CONSTRUCTION REQUIREMENTS**

#### **SECTION 1201. General Requirements**

Buildings proposed for construction shall comply with all the regulations and specifications herein set forth governing quality, characteristics and properties of materials, methods of design and construction, type of occupancy and classification.

All other matters relative to the structural design of all buildings and other structures not provided for in this Chapter shall conform with provisions of the Engineering pursuant to Republic Act Number 544, as amended, otherwise knows as the “Civil Engineering Law”.

#### **SECTION 1202. Excavation, Foundation, and Retaining Walls**

(a) Subject to the provisions of Articles 684 to 686 of the Civil Code of the Philippines on lateral and subjacent support, the design and quality of materials used structurally in excavation, footings, and in foundations shall conform to accepted engineering practice.

##### **(b) Excavation and Fills**

(1) Excavation or fills for buildings or structures shall be so constructed or protected that they do not endanger life or property.

(2) Whenever the depth of excavation for any construction is such that the thereon would be affected in a manner that the stability or safety of the same is endangered, the person undertaking or causing the excavation to be undertaken shall be responsible for the expense of underpinning or extending the foundation or footings of the aforementioned property or structure.

(3) Excavation and other similar disturbance made on public property shall, unless otherwise excluded by the Building Official, be restored immediately to its former condition within 48 hours from the start of such excavation and disturbances by whosoever caused such excavation of disturbance.

(c) Footings, Foundations, and Retaining Walls

- (1) Footings and foundations shall be of the appropriate type, of adequate size, and capacity in order to safely sustain the superimposed loads under seismic or any condition of external forces that may affect the safety or stability of the structure. It shall be the responsibility of the architect and/or engineer to adopt the type and design of the same in accordance with the standards set forth by the Secretary.
- (2) Whenever or wherever there exist in the site of the construction an abrupt change in the groundlevels or level of the foundation such that instability of the soil could result, retaining walls shall be provided and such shall be of adequate design and tupe of construction as prescribed by the Secretary.

**SECTION 1203. Veneer**

(a) Definition. Veneer is a nonstructural facing of brick, concrete, tile, metal, plastic, glass, or other similar approved materials attached to a backing or structural components of the building for the purpose of ornamentation, protection, or enclosure that may be adhered, integrated, or anchored either on the interior or exterior of the building or structure.

(b) Design Requirements. The design of all veneer shall comply with the following:

- (1) Veneer shall support no load other than its own weight and vertical dead load of veneer immediately above.
- (2) Surfaces to which veneer is attached shall be designed to support the additional vertical and lateral loads imposed by the veneer.
- (3) Consideration shall be given to differential movements of the supports including those caused by temperature changes, shrinkage, creep, and deflection.
- (4) Adhered veneer and its backing shall be designed to have a bond to the supporting elements sufficient to withstand shearing stresses due to their weights including seismic effects on the total assemblage.
- (5) Anchored veneer and its backing shall designed t o have a bond to the supporting elements sufficient to withstand shearing stresses due to their weights including seismic effects on the total assemblage.
- (6) Anchors supports and ties shall be non-combustible and corrosion-resistant.

**SECTION 1204. Enclosure of Vertical Openings**

(a) General. Vertical openings shall be enclosed depending upon the fire-resistive requirements of a particular type of construction as set forth in this Code.

(b) Elevator Enclosures. Walls and partitions enclosing elevators and escalators shall be of not less than the fire-resistive construction required under the types of Construction. Enclosing walls of

elevator shafts may consist of wire glass set in metal frames on the entrance side only. Elevator shafts extending through more than two storeys shall be equipped with and approved means of adequate ventilation to and through the main roof of the building: Provided, that in those buildings housing Groups F and G Occupancies equipped with automatic fire-extinguishing systems throughout, enclosures shall not be required for escalators: Provided, further that the top of the escalator opening at each storey shall be provided with a draft curtain. Such draft curtain shall enclose the perimeter of the unenclosed opening and shall extend from the ceiling downward at least 300 millimeters on all sides. Automatic sprinklers shall be provided around the perimeter of the opening and within a 600 millimeters of the draft curtain. The distance between the sprinkles shall not exceed 1.80 meters center-to-center.

(c) Other Vertical Openings. All shafts ducts, chutes, and other vertical openings not covered in paragraph (b) above shall have enclosing walls conforming to the requirements specified under the type of construction of the building in which they are located. In other than Group A Occupancies rubbish and linen chutes shall terminate in rooms separated from the remainder of the building by a One-Hour Fire-Resistive Occupancy Separation. Openings in to the chutes shall not be located in required exit corridors or stairways.

(d) Air Ducts. Air ducts passing through a floor shall be enclosed in a shaft. The shaft shall be as required in this Code for vertical openings. Dampers shall be installed where ducts pierce the shaft enclosure walls. Air ducts in Group A Occupancies need not be enclosed in a shaft if conforming to the mechanical provisions of this Code.

### **SECTION 1205. Floor Construction**

(a) Floors shall be of such materials and construction as specified under Chapter 5 Fire Zones and Fire-Resistive Standards and under Chapter 6 - Types of Construction.

(b) All floors shall be so framed and secured into the framework and supporting walls to form an integral part of the whole building.

(c) The types of floor construction used shall provide means to keep the beam and girders from lateral buckling.

### **SECTION 1206. Roof Construction and Covering**

(a) Roof Covering. Roof covering for all buildings shall be either fire-retardant or ordinary depending upon the fire-resistive requirements of the particular type of construction. The use of combustible roof insulation shall be permitted in all types of construction provided it is covered with approved roof covering applied directly thereto.

(b) Roof Trusses. All roofs shall be framed and tied into the framework and supporting walls so as to form an integral part of the whole building. Roof trusses shall have all joints well fitted and shall have all tension members well tightened before any load is placed in the truss. Diagonal and sway bracing shall be used to brace all roof trusses. The allowable working stresses of materials in trusses shall conform to this Code. Camber shall be provided to prevent sagging.

(c) Attics

(1) Access. An attic access opening shall be provided in the ceiling of the top floor of buildings with a combustible ceiling or roof construction. The opening shall be located in a corridor or hallway of buildings of three or more storeys in height, and readily accessible in buildings of any height. An opening shall not be less than 600 millimeters square or 600 millimeters in diameter. The minimum clear headroom of 800 millimeters shall be provided above the access opening. For ladder requirements, refer to the Philippine Mechanical Engineering Code.

(2) Area Separation. Enclosed attic spaces of combustible construction shall be divided into horizontal areas not exceeding 250 square meters by fire-resistive partitions extending from the ceiling to the roof. Except, that where the entire attic is equipped with approved automatic fire-extinguishing system, the attic space may be divided into areas not to exceed 750 square meters. Openings in the partitions shall be protected by self-closing doors.

(3) Draft Stops. Regardless of the type of construction, draft stops shall be installed in trusses roofs, between roof and bottom chords of trusses, in all buildings exceeding 2000 square meters. Draft stops shall be constructed as for attic area separations.

(4) Ventilation. Enclosed attics including rafter spaces formed where ceilings are applied direct to the underside or roof rafters, shall be provided with adequate ventilation protected against the entrance of rain.

#### (d) Roof Drainage System

(1) Roof Drains. Roof drains shall be installed at low points of the roof and shall be adequate in size to discharge all tributary waters.

(2) Overflow Drains and Scuppers. Where roof drains are required, adequate overflow drains shall be provided.

(3) Concealed Piping. Roof drains and overflow drains, when concealed within the construction of the building, shall be installed in accordance with the provisions of the National Plumbing Code.

(4) Over Public Property. Roof drainage water from a building shall not be permitted to flow over public property, except for Group A and J Occupancies.

(e) Flashing. Flashing and counterflashing shall be provided at the juncture of the roof and vertical surfaces.

### **SECTION 1207. Stairs, Exits, and Occupant Loads**

(a) General. The construction of stairs and exits shall conform to the occupant load requirements of buildings, reviewing stands, bleachers, and grandstands,

(1) Determination of Occupant Loads. The occupant load permitted in any building or portion thereof shall be determined by dividing the floor area assigned to that use by the unit area allowed per occupant as determined by the Secretary.

(2) Exit Requirements. Exit requirements of a building or portion thereof used for different purposes shall be determined by the occupant load which gives the largest number of persons. No obstruction shall be placed in the required width of an exit except projections permitted by this Code.

(3) Posting of Room Capacity. Any room having an occupant load of more than 50 where fixed seats are not installed, and which is used for classroom, assembly, or similar purpose shall have the capacity of the room posted in a conspicuous place near the main exit from the room.

(4) Changes in elevation. Except in Group A Occupancies, changes in floor elevations of less than 300 millimeters along any exit serving a tributary occupant load of 10 or more shall be by means of ramps.

(b) Exits

(1) Number of Exits. Every building or usable portion thereof shall have at least one exit. In all occupancies, floors above the first storey having an occupant load of more than 10 shall not have less than two exits. Each mezzanine floor used for other than storage purposes, if greater in area than 185 square meters or more than 18.00 meters in any dimension, shall have at least two stairways to an adjacent floor. Every storey or portion thereof, having an occupant load of 500 to 999 shall have at least three exits. Every storey or portion thereof having an occupant load of 1000 or more shall have at least four (4) exits. The number of exits required from any storey of a building shall be determined by using the occupant loads of floors which exit through the level under consideration as follows: 50 percent of the occupant load in the first adjacent storey above (and the first adjacent storey below, when a storey below exits through the level under consideration) and 25 percent of the occupant load in the storey immediately beyond the first adjacent storey. The maximum number of exits required for any storey shall be maintained until egress is provided from the structures. For purposes of this Section basement or cellars and occupied roofs shall be provided with exits as required for storeys. Floors above the second storey, basements and cellars used for other than service of the building shall have not less than two exits.

(2) Width. The total width of exits in meters shall not be less than the total occupant load served divided by 165. Such width of exits shall be divided approximately equally among the separate exits. The total exit width required from any storey of a building shall be determined by using the occupant load of that storey plus the percentage of the occupant loads of floors which exits through the level under consideration as follows: fifty (50) percent of the occupant load in the first adjacent storey above (and the first adjacent storey below when a storey below exits through the level under consideration) and twenty five percent of the occupant load in the storey immediately beyond the first adjacent storey. The maximum exit width from any storey of a building shall be maintained.

(3) Arrangement of Exits. If only two exits are required they shall be placed a distance apart to not less than one-fifth of the perimeter of the area served measured in a straight line between exits. Where three or more exits are required they shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.

(4) Distance to Exits. No point in a building without a sprinkler system shall be more than 45.00 meters from an exterior exit door, a horizontal exit, exit passageway, or an enclosed stairway, measured along the line of travel. In a building equipped with a complete automatic fire extinguishing system the distance from exits may be increased to 60.00 meters.

(c) Doors. The provisions herein shall apply to every exit door serving an area having an occupant load of more than 10, or serving hazardous rooms or areas.

(1) Swing. Exit door shall swing in the direction of exit travel when serving any hazardous areas or when serving an occupant load of 50 or more. Double acting doors shall not be used as exits serving a tributary occupant load of more than 100; nor shall they be used as a part of fire assembly, nor equipped with panic hardware. A double acting door shall be provided with a view panel of not less than 1,300 square centimeters.

(2) Type of Lock or Latch. Exit door shall be openable from the inside without the use of a key or any special knowledge or effort: Except, that this requirement shall not apply to exterior exit doors in a Group E or F Occupancy if there is a conspicuous, readily visible and durable sign on or adjacent to the door, stating that the door is to remain unlocked during business hours. The locking device must be of a type that will readily be distinguishable as locked. Flush bolts or surface bolts are prohibited.

(3) Width and Height. Every required exit doorway shall be of a size as to permit the installation of a door not less than 900 millimeters in width and not less than 2.00 meters in height. When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 700 millimeters. In computing the required exit width the net dimension of the exitway shall be used.

(4) Door Leaf Width. No leaf of an exit door shall exceed 1.20 meters in width.

(5) Special Doors. Revolving, sliding, and overhead doors shall not be used as required exits.

(6) Egress from Door. Every required exit door shall give immediate access to an approved means of egress from the building.

(7) Change in Floor Level at Doors. Regardless of the occupant load there shall be a floor or landing on each side of an exit door. The floor or landing shall be leveled with, or not more than 50 millimeters lower than the threshold of the doorway: Except, that in Group A and B Occupancies, a door may open on the top step of a flight of stairs or an exterior landing provided the door does not swing over the top step or exterior landing and landing is not more than 200 millimeters below the floor level.

(8) Door Identification. Glass doors shall conform to the requirements in Section 1805 Other exit doors shall be so marked that they are readily distinguishable from the adjacent construction.

(9) Additional Doors. When additional doors are provided for egress purposes, they shall conform to all provisions in the following cases: Approved revolving doors having leaves which will collapse under opposing pressures may be used in exit situations; provided; that such doors have a minimum width of 2.00 meters or they are not used in occupancies where exits are required to be equipped with panic hardware or at least one conforming exit door is located adjacent to each revolving door installed in a building and the revolving door shall not be considered to provide any exit width.

(d) Corridors and Exterior Exit Balconies. The provisions herein shall apply to every corridor and exterior exit balcony serving as a required exit for an occupant load of more than ten.

(1) Width. Every corridor or exit balcony shall not be less than 1.10 meters in width.

(2) Projections. The required width of corridors and exterior exit balconies shall be unobstructed: Except, that trim handrails, and doors when fully opened shall not reduce the required width by more than 200 millimeters. Doors in any position shall not reduce the required width of the corridor by more than one-half.

(3) Access to Exits. When more than one exit is require, they shall be so arranged to allow going to either direction from any point in the corridor or exterior exit balcony to a separate exit, except for dead ends permitted by this Code.

(4) Dead Ends. Corridors and exterior exit balconies with dead ends are permitted when the dead end does not exceed 6.00 meters in length.

(5) Construction. Walls and ceiling of corrdors shall not be less than one-hour fire-resistive construction. Provided, that this requirement shall not apply to exterior exit balconies, railings, and corrdiors of one-storey building housing a Group E and F nor to corrdors, formed by temporary partitions. Exterior exit balconies shall not project into an area where protected openings are required.

(6) Openings. Where corridor wall are required to be one-hour fire-resistive construction, every interior door opening shall be protected as set forth in generally recognized and accepted requirements for dual purpose fire exit doors. Other interior openings except ventilation louvers equipped with approved automatic fire shutters shall be 7 millimeters thich fixed wire glass set in steel framed. the total area of all openings other than doors, in any portion of an interior corridor wall shall not exceed twenty-five percent of the area of the corridor wall of the room being separated from the corridor.

(e) Stairways. Except stairs or ladders used only to access equipment, every stairway serving any building or portion thereof shall conform to the following requirements:

(1) Width. Stairways serving an occupant load of more than 50 shall not be less than 1.10 meters. Stairways serving an occupant load of 50 or less may be 900 millimeters wide. Private stairways serving an occupant load of less than 10 may be 750 millimeters. Trim and handrails shall not reduce the required width by more than 100 millimeters.

(2) Rise and Run. The rise of every step in a stairway shall not exceed 200 millimeters and the run shall not be less than 250 millimeters. The maximum variations in the height of risers and the width of treads in any one flight shall be 5 millimeters: Except, in case of private stairways serving an occupant load of less than 10, the rise may be 200 millimeters and the run may be 250 millimeters, except as provided in sub-paragraph (3) below.

(3) Winding Stairways. In Group A Occupancy and in private stairways in Group B Occupancies, winders may be used if the required width of run is provided at a point not more than 300 millimeters from the side of the stairway where the treads are narrower but in no case shall any width of run be less than 150 millimeters at any point.

(4) Circular Stairways. Circular stairs may be used as an exit provided the minimum width of run is not less than 250 millimeters. All treads in any one flight between landings shall have identical dimensions within a 5 millimeter tolerance.

(5) Landings. Every landing shall be a dimension measured in the direction of travel equal to the width of the stairway. Such dimension need not exceed 1.20 meters when the stairs has a straight run.

Landings when provided shall not be reduced in width by more than 100 millimeters by a door when fully open.

(6) Basement Stairways. Where a basement stairway and stairway to an upper storey terminate in the same exit enclosure, an approved barrier shall be provided to prevent persons from continuing on to the basements. Directional exit signs shall be provided as specified in this Code.

(7) Distance Between Landings. There shall be not more than 3.60 meters vertical distance between landings.

(8) Handrails. Stairways shall be handrails on each side and every stairway required to be more than 3.00 meters in width shall be provided with not less than one intermediate handrail for each 3.00 meters of required width. Intermediate handrails shall be spaced approximately equal within the entire width of the stairway. Handrails shall be placed not less than 800 millimeters nor more than 900 millimeters above the nosing of treads, and ends of handrails shall be returned or shall terminate in newel posts or safety terminals: Except, in the following cases: Stairways 1.10 meters or less in width and stairways serving one individual dwelling unit in Group A or B Occupancies may have one handrail, except that such stairway, open on one or both, sides shall have handrails provided on the open side or side: or stairways having less than four risers need not have handrails.

(9) Exterior Stairway Protection. All openings in the exterior wall below or within 3.00 meters, measured horizontally, of an exterior exit stairway serving a building over two storeys in height shall be protected by a self-closing fire assembly having a three-fourths hour fire-resistive rating: Except, that openings may be unprotected when two separated exterior stairways serve an exterior exit balcony.

(10a) Stairways Construction-Interior. Interior stairways shall be constructed as specified in this Code. Where there is enclosed usable space under the stairs the wall and soffits of the enclosed space shall be protected on the enclosed side as required for one-hour fire resistive construction.

(10b) Stairway Construction-Exterior. Exterior stairways shall be of incombustible material: Except, that on Type III buildings which do not exceed two storeys in height, which are located in less fire-restrictive Fire Zones, as well as on Type I buildings which may be of wood not less than 50 millimeters in nominal thickness. Exterior stairs shall be protected as required for exterior walls due to location on property as specified in this Code. Exterior stairways shall not project into an area where openings are required to be protected. Where there is enclosed usable space under stairs, the walls and soffits of the enclosed space shall be protected on the enclosed side as required for one-hour fire-resistive construction.

(11) Stairway to Roof. In every building four or more storeys in height, one stairway shall extend to the roof unless the roof has C slope greater than 1 in 3.

(12) Headroom. Every required stairway shall have a headroom clearance of not less than 2.00 meters. Such clearance shall be established by measuring vertically from a plane parallel and tangent to the stairway tread nosing to the soffit above all points.

(f) Ramps. A ramp conforming to the provisions of this Code may be used as an exit. The width of ramps shall be as required for corridors.

(g) Horizontal Exit. If conforming to the provisions of this Code, a horizontal exit may be considered as the required exit. All openings in a separation wall shall be protected by a fire assembly having a fire-resistive rating of not less than one hour. A horizontal exit shall not lead into a floor area having a capacity for an occupant load not less than the occupant load served by such exit. The capacity shall be determined by allowing 0.30 square meter of net floor area per ambulatory occupant and 1.90 square meters per non-ambulatory occupant. The dispersal area into which the horizontal exit leads shall be provided with exits as required by this Code.

(h) Exit Enclosures. Every interior stairway, ramp, or escalator shall be enclosed as specified in this Code: Except, that in other than Group D Occupancies, an enclosure will not be required for stairway, ramp, or escalator serving only one adjacent floor and not connected with corridors or stairways serving other floors. Stairs in Group A Occupancies need not be enclosed.

(1) Enclosure walls shall not be less than two-hour fire-resistive construction. There shall be no openings into exit enclosures except exit doorways and openings in exterior walls. All exit doors in an exit enclosure shall be appropriately protected.

(2) Stairway and ramp enclosures shall include landings and parts of floors connecting stairway flights and shall include a corridor on the ground floor leading from the stairway to the exterior of the building. Enclosed corridors or passageways are not required for unenclosed stairways.

(3) A stairway in an exit enclosure shall not continue below the grade level exit unless an approved barrier is provided at the ground floor level to prevent persons from accidentally continuing into the basement.

(4) There shall be no enclosed usable space under stairways in an exit enclosure, nor shall the open space under such stairways be used for any purpose.

(i) Smokeproof Enclosures

A smokeproof enclosure shall consist of a vestibule and a continuous stairway enclosed from the highest point by walls of two-hour fire-resistive construction. In buildings five storeys or more in height, one of the required exits shall be a smokeproof enclosure.

(1) Stairs in smokeproof enclosures shall be of incombustible construction.

(2) There shall be no openings in smokeproof enclosures, except exit doorways and openings in exterior walls. There shall be no openings directly into the interior of the building. Access shall be

through a vestibule with one wall at least fifty percent open to the exterior and having an exit door from the interior of the building and an exit door leading to the smokeproof enclosure. In lieu of a vestibule, access may be by way of an open exterior balcony of incombustible materials.

(3) The opening from the building to the vestibule or balcony shall be protected with a self-closing fire assembly having one-hour fire-resistive rating. The opening from the vestibule or balcony to the stair tower shall be protected by a self-closing fire assembly having a one-hour fire-resistive rating.

(4) A smokeproof enclosure shall exit into a public way or into an exit passageway leading to a public way. The exit passageway shall be without other openings and shall have walls, floors, and ceiling of two-hour fire-resistance.

(5) A stairway in a smokeproof enclosure shall not continue below the grade level exit unless an approved barrier is provided at a ground floor level to prevent persons from accidentally walking into the basement.

#### (j) Exit Outlets, Courts, and Passageways

Every exit shall discharge into a public way, exit court, or exit passageway. Every exit court shall discharge into a public way or an exit passageway. Passageways shall be without openings other than required exits and shall have walls, floors, and ceilings of the same period of fire-resistance as the walls floors and ceilings of the building but shall not be less than one-hour fire-resistive construction.

##### (1) Width

Every exit court and exit passageways shall be at least as wide as the required total width of the tributary exits, such required width being based on the occupant load served. The required width of exit courts or exit passageways shall be unobstructed except as permitted in corridors. At any point where the width of an exit court is reduced from any cause, the reduction in width shall be affected gradually by a guardrail at least 900 millimeters in height. The guardrail shall make an angle of not more than 30 degrees with the axis of the exit court.

##### (2) Slope

The slope of exit courts shall not exceed 1 in 10. The slope of exit passageway shall not exceed 1 in 8.

##### (3) Number of Exits

Every exit court shall be provided with exits as required in this Code.

##### (4) Openings

All openings into an exit court less than 3.00 meters wide shall be protected by fire assemblies having not less than three-fourth hour fire-resistive rating. Except, that openings more than 3.00 meters above the floor of the exit court may be unprotected.

#### (k) Exit Signs and Illuminations

Exits shall be illuminated at any time the building is occupied with lights having an intensity of not less than 10.7 lux at floor level: Except, that for Group A Occupancies, the exit illumination shall be provided with separate circuits or separated sources of power (but not necessarily separate from exit signs when these are required for exit sign illumination).

(l) Aisles

Every portion of every building in which are installed seats, tables, merchandise, equipment, or similar materials shall be provided with aisles leading to an exit.

(1) Width

Every aisle shall be not less than 800 millimeters wide if serving only one side, and not less than 1 meter wide if serving both sides. Such minimum width shall be measured at the point farthest from an exit, cross aisle, or foyer and shall be increased by 30 millimeters for every meter in length towards the exit, cross aisle or foyer.

Side aisles shall not be less than 1.10 meters in width.

(2) Exit Distance

In areas occupied by seats and Groups H and I Occupancies without seats, the line of travel to an exit door by an aisle shall be not more than 45.00 meters. With standard spacing, as specified in this Code, aisles shall be so located that there will be not more than seven seats between the wall and an aisle and not more than fourteen seats between aisles. The number of seats between aisles may be increased to 30 where exist doors are provided along each side aisle of the row of seats at the rate of one pair of exit doors for every five rows of seats, provided further that the distance between seats back to back is at least one meter. Such exit doors shall provide a minimum clear width of 1.70 meters.

(3) Cross Aisles

Aisles shall terminate in a cross aisle, foyer, or exit. The width of the cross aisle shall be not less than the sum of the required width of the widest aisle plus fifty percent of the total required width of the remaining aisle leading thereto. In Groups C, H and E Occupancies, aisles shall not be provided a dead end greater than 6.00 meters in length.

(4) Vomitories

Vomitories connecting the foyer or main exit with the cross aisles shall have a total width not less than the sum of the required width of the widest aisles leading thereto plus fifty percent of the total required width of the remaining aisles leading thereto.

(5) Slope

The slope portion of aisles shall not exceed a fall of 1 in 8.

(m) Seats

## (1) Seat Spacing

With standard seating, the spacing of rows of seats from back-to-back shall be not less than 840 millimeters. With continental seating, the spacing of rows of unoccupied seats shall provide a clear width measure horizontally, as follows: 450 millimeters clear for rows of 18 seats or less; 500 millimeters clear for rows of 35 seats or less; 525 millimeters clear for rows of 45 seats or less; and 550 millimeters clear for rows of 46 seats or more.

## (2) Width

The width of any seat shall be not less than 450 millimeters.

## (n) Reviewing Stands, Grandstands, and Bleachers

### (1) Height of Stands

Stands made of combustible framing shall be limited to 11 rows or 2.70 meters in height.

### (2) Design Requirements

The minimum unit live load for reviewing stands, grandstands, and bleachers shall be 500 kilograms per square meter of horizontal projection for the structures as a whole. Seat and footboards shall be 180 kilograms per linear meter. The sway force, applied seats, shall be 35 kilograms per linear meter parallel to the seats and 15 kilograms per linear meter perpendicular to the seats. Sway forces need not be applied simultaneously with other lateral forces.

## (3) Spacing of Seats

### (3.1) Row Spacing

The minimum spacing of rows of seats measured from back-to-back shall be : 600 millimeters for seats without backrests in open air stands; 750 millimeters for seats with backrests; and 850 millimeters between for chair seating. There shall be a space of not less than 300 millimeters between the back of each seat and the front of the seat immediately behind it.

### (3.2) Rise Between Rows

The maximum rise from one row of seats to the next shall not exceed 400 millimeters.

### (3.3) Seating Capacity

For determining the seating capacity of a stand, the width of any seat shall not be less than 450 millimeters nor more than 480 millimeters.

### (3.4) Number of Seats Between Aisles

The number of seats between any seat and an aisle shall not be greater than 15 for open air stands with seats without backrests, a far open air stands with seats having backrests and seats without backrests within building and 6 for seats with backrests in buildings.

#### (4) Aisles

##### (4.1) Aisles Required

Ailes shall be provided in all stands; Except, that aisles may be omitted when all the following conditions exist: Seats are without backrests; the rise from row to row does not exceed 300 millimeters per roq; the number of rows does not exceed 11 in height; the top seating board is not over 3.00 meters above grade; and the first seating board is not more than 500 millimeters above grade.

##### (4.2) Obstructions

No obstruction shall be placed in the required width of any aisle or exitway.

##### (4.3) Stairs required

When an aisle shall have a dead end more than 16 rows in depth regardless of the number of exits required.

##### (4.4) Dead End

No vertical aisle shall have a dead end more than 16 rows in depth regardless of the number of exits required.

##### (4.5) Width

Aisles shall have a minimum width of 1.10 meters.

#### (5) Stairs and Ramps

The requirements in this Code shall apply to all stairs and ramps except for portions that pass through the seating area.

##### (5.1) Stair Rise and Run

The maximum rise of treads shall not exceed 200 millimeters and the minimum width of the run shall be 280 millimeters. The maximum variation in the width of treads in any one flight shall not be more than 5 millimeters and the maximum variation in one height of two adjacent rises shall not exceed 5 millimeters.

##### (5.2) Ramp Slope

The slope of a ramp shall not exceed 1in 8. Ramps shall be roughened or shall be of approved nonslip material.

### (5.3) Handrails

A ramp with a slope exceeding 1 in 10 shall have handrails. Stairs for stands shall have handrails. Handrails shall conform to the requirements of this Code.

### (6) Guardrails

(6.1) Guardrails shall be required in all locations where the top of a seat plank is more than 1.20 meters above the grade and at the front of stands elevated more than 600 millimeters above grade. Where only sections of stands are used, guardrails shall be provided as required in this Code.

(6.2) Railings shall be 1.10 meters above the rear of a seat plank or 1.10 meters above the rear of the steps in an aisle when the guardrail is parallel and adjacent to the aisle: Except, that the height may be reduced to 900 millimeters for guardrails located in front of the grandstand.

(6.3) A midrail shall be placed adjacent to any seat to limit the open distance above the top of any part of a seat to 250 millimeters where the seat is at the extreme end or at the extreme rear of the bleachers or grandstand. The intervening space shall have one additional rail midway in the opening: Except, that railings may be omitted when stands are placed directly against a wall or fence giving equivalent protection; stairs and ramps shall be provided with guardrails. Handrails at the front of stands and adjacent to an aisle shall be designed to resist a load of 75 kilograms per linear meter applied at the top rail. Other handrails shall be designed to resist a load of 40 kilograms per linear meter.

### (7) Foot Boards

Footboards shall be provided for all rows of seats above the third row or beginning at such point where the seating plank is more than 600 millimeters above grade.

### (8) Exits

#### (8.1) Distance to Exit

The line of travel to an exit shall not be more than 45.00 meters. For stands with seats without backseats this distance may be measured by direct line from a seat to the exit from the stand.

#### (8.2) Aisle Used as Exit

An aisle may be considered as only one exit unless it is continuous at both ends to a legal building exit or to a safe dispersal area.

#### (8.3) Two Exits Required

A stand with the first seating board not more than 500 millimeters above grade of floor may be considered to have two exits when the bottom of the stand is open at both ends. Every stand or section of a stand within a building shall have at least two means of egress when the stand accommodates more than 50 persons. Every open air stand having seats without backrests shall have at least two means of egress when the stand accommodates more than 300 persons.

#### (8.4) Three Exits Required

Three exits shall be required for stands within a building when there are more than 300 occupants within a stand and for open air stands with seats without backrests where a stand or section of a stand accommodates more than 1000 occupants.

#### (8.5) Four Exits Required

Four exits shall be required when a stand or section of a stand accommodates more than 1000 occupants: Except, that for an open air stand with seats without backrest four exits need not be provided unless there are accommodations for more than 3000 occupants.

#### (8.6) Width

The total width of exits in meters shall not be less than the total occupant load served divided by 165: Except, that for open air stands with seats without backrest the total width of exits in meters shall be not less than the total occupant load served divided by 500 when exiting by stairs, and divided by 650 when exiting by ramps or horizontally. When both horizontal and stair exits are used, the total width of exits shall be determined by using both figures as applicable. No exit shall be less than 1.10 meters in width. Exits shall be located at a reasonable distance apart. When only two exits are provided, they shall be spaced not less than one-fifth of the perimeter apart.

### (9) Securing of Chairs

Chairs and benches used on raised stands shall be secured to the platforms upon which they are placed: Except, that when less than 25 chairs are used upon a single raised platform the fastening of seats to the platform may be omitted. When more than 500 loose chairs are used in connection with athletic events, chairs shall be fastened together in groups of not less than three, and shall be tied or staked to the ground.

### (10) Safe Dispersal Area

Each safe dispersal area shall have at least two exits. If more than 6000 persons are to be accommodated within such an area, there shall be a minimum of three exits, and for more than 9000 persons there shall be a minimum of four exits. The aggregate clear width of exits from a safe dispersal area shall be determined on the basis of not less than one exit unit of 600 millimeters for each 500 person to be accommodated and no exit shall be less than 1.10 meters in width, a reasonable distance apart but shall be spaced not less than one-fifth of the perimeter of the area apart from each other.

#### (o) Special Hazards

##### (1) Boiler Rooms

Except in Group A Occupancies, every boiler room and every room containing an incinerator or liquified petroleum gas or liquid fuel-fired equipment shall be provided with at least two means of egress, one of which may be a ladder. All interior openings shall be protected as provided for in this Code.

## (2) Cellulose Nitrate Handling

Film laboratories, projection rooms, and nitro-cellulose processing rooms shall have not less than two exits.

### SECTION 1208. Skylights

(a) All skylights shall be constructed with metal frames except those for Groups A and J Occupancies. Frames of skylights shall be designed to carry loads required for roofs. All skylights, the glass of which is set at an angle of less than 45 degrees from the horizontal, if located above the first storey, shall be set at least 100 millimeters above the roof. Curbs on which the skylights rest shall be constructed of incombustible materials except for Types I or II Construction.

(b) Spacing between supports in one direction for flat wired glass in skylights shall not exceed 625 millimeters. Corrugated wired glass may have supports 1.50 meters apart in the direction of the corrugation. All glass in skylights shall be wired glass: Except, that skylights over vertical shafts extending through two or more storeys shall be glazed with plain glass as specified in this Code: Provided, that wired glass may be used in ventilation equal to not less than one-eighth the cross-sectional area of the shaft but never less than 1.20 meters provided at the top of such shaft. Any glass not wired glass shall be protected above and below with a screen constructed of wire not smaller than 2.5 millimeters in diameter with a mesh not larger than 25 millimeters. The screen shall be substantially supported below the glass.

(c) Skylights installed for the use of photographers may be constructed of metal frames and plate glass without wire netting.

(d) Ordinary glass may be used in the roof and skylights for greenhouses, Provided, that height of the greenhouses at the ridge does not exceed 6.00 meters above the grade. The use of wood in the frames of skylights will be permitted in greenhouses outside of highly restrictive Fire zone if the height of the skylight does not exceed 6.00 meters above the grade, but in other cases metal frames and metal sash bars shall be used.

(e) Glass used for the transmission of light, if placed in floors or sidewalks, shall be supported by metal or reinforced concrete frames, and such glass shall not be less than 12.5 millimeters in thickness. Any such glass over 100 square centimeters in area shall have wire mesh embedded in the same or shall be provided with a wire screen underneath as specified for skylights in this Code. All portions of the floor lights or sidewalk lights shall be of the same strength as required for floor or sidewalk construction, except in cases where the floor is surrounded by a railing not less than 1.10 meters in height, in which case the construction shall be calculated for not less than roof loads.

### SECTION 1209. Bays, Porches, and Balconies

(a) Walls and floors in bay and oriel windows shall conform to the construction allowed for exterior walls and floors of the type of construction of the building to which they are attached. The roof covering of a bay or oriel window shall conform to the requirements of the roofing of the main roof. Exterior balconies attached to or supported by wall required to be of masonry, shall have brackets or beams constructed of incombustible materials. Railings shall be provided for balconies, landings, or porches which are more than 750 millimeters above grade.

## **SECTION 1210. Penthouses and Roof Structures**

### **(a) Height**

No penthouse or other projection above the roof in structures of other than Type V construction shall exceed 8.40 meters above the roof when used as an enclosure for tanks or for elevators which run to the roof and in all other cases shall not extend more than 3.60 meters in height with the roof.

### **(b) Area**

The aggregate area of all penthouses and other roof structures shall not exceed one third of the area of the supporting roof.

### **(c) Prohibited Uses**

No penthouse, bulkhead, or any other similar projection above the roof shall be used for purposes other than shelter of mechanical equipment or shelter of vertical shaft openings in the roof. A penthouse or bulkhead used for purposes other than that allowed by this Section shall conform to the requirements of this Code for an additional storey.

### **(d) Construction**

Roof structures shall be constructed with walls, floors, and roof as required for the main portion of the building except in the following cases:

(1) On Types III and IV constructions, the exterior walls and roofs of penthouses which are 1.50 meters or more from an adjacent property line may be of one-hour fire-resistive incombustible construction.

(2) Walls not less than 1.50 meters from an exterior wall of a Type IV construction may be of one-hour fire-resistive incombustible construction.

The above restrictions shall not prohibit the placing of flagpoles or similar structures on the roof of any building.

### **(e) Towers and Spires**

Towers and spires when enclosed shall have exterior walls as required for the building to which they are attached. Towers not enclosed and which extend more than 20.00 meters above the grade shall have their framework constructed of iron, steel, or reinforced concrete. No tower or spire shall occupy more than one-fourth of the street frontage of any building to which it is attached and in no case shall the base area exceed 150 square meters unless it conforms entirely to the type of construction requirements of the building to which it is attached and is limited in height as a main part of the building. If the area of the tower and spire exceeds 10.00 square meters on any horizontal cross section, its supporting frames shall extend directly to the ground. The roof covering of the spires shall be as required for the main room of the rest of the structure. Skeleton towers used as radio masts, neon signs, or advertising frames and placed on the roof of any building shall be constructed entirely of incombustible materials when more than 7.50 meters in height, and shall be directly supported on an incombustible framework to the ground.

No such skeleton towers shall be supported on roofs of combustible framings. They shall be designed to withstand a wind load from any direction in addition to any other loads.

## **SECTION 1211. Chimneys, Fireplace, and Barbecues**

### (a) Chimneys

#### (1) Structural Design

Chimneys shall be designed, anchored, supported, reinforced, constructed, and installed in accordance with generally accepted principles of engineering. Every chimney shall be capable of producing a draft at the appliance not less than that required for the safe operation of the appliance connected thereto. No chimney shall support any structural load other than its own weight unless it is designed to act as a supporting member. Chimneys in a wood-framed building shall be anchored laterally at the ceiling line and at each floor line which is more than 1.80 meters above grade, except when entirely within the framework or when designed to be free standing.

#### (2) Walls

Every masonry chimney shall have walls of masonry units, bricks, stones, listed masonry chimney units, reinforced concrete or equivalent solid thickness of hollow masonry and lined with suitable liners in accordance with the following requirements:

##### (2.1) Masonry Chimneys for Residential Type Appliances

Masonry chimneys shall be constructed of masonry units or reinforced concrete with walls not less than 100 millimeters thick; or of rubble stone masonry not less than 300 millimeters thick. The chimney liner shall be in accordance with this Code.

##### (2.2) Masonry Chimneys for Low Heat Appliances

Masonry chimneys shall be constructed of masonry units or reinforced concrete with walls not less than 200 millimeters thick; *Except*, that rubble stone masonry shall be not less than 300 millimeters thick. The chimney liner shall be in accordance with this Code.

##### (2.3) Masonry Chimneys for Medium-Heat Appliances

Masonry chimneys for medium-heat appliances shall be constructed of solid masonry units of reinforced concrete not less than 200 millimeters thick and, in addition shall be lined with not less than 100 millimeters of firebrick laid in a solid bed of fire clay mortar with solidly filled head, bed, and wall joints, starting not less than 600 millimeters below the chimney connector entrance. Chimneys extending 7.50 meters or less above the chimney connector shall be lined to the top.

##### (2.4) Masonry Chimneys for High-Heat Appliances

Masonry chimneys for high-heat appliances shall be constructed with double walls of solid masonry units or reinforced concrete not less than 200 millimeters in thickness with an air space of not less than 50 millimeters between walls. The inside of the interior walls shall be of firebrick not less than

100 millimeters in thickness laid in a solid bed of fire clay mortar with solidly filled head, bed, and wall joints.

#### (2.5) Masonry Chimneys for incinerators installed in Multi-Storey Buildings (Apartment-Type Incinerators)

Chimneys for incinerators installed in multi-storey buildings using the chimney passageway as a refuse chute where the horizontal grate area of combustion chamber does not exceed 0.80 square meter shall have walls of solid masonry or reinforced concrete, not less than 100 millimeters thick with a chimney lining as specified in this Code. If the great area of such an incinerator exceeds 0.80 square meter, the walls shall not be less than 100 millimeters of firebrick except that higher than 9.00 meters above the roof of the combustion chamber, common brick alone 200 millimeters in thickness may be used.

#### (2.6) Masonry Chimneys for Commercial and Industrial Type Incinerators

Masonry chimneys for commercial and industrial type incinerators of a size designed for not more than 110 kilograms of refuse per hour and having a horizontal grate area not exceeding 0.50 square meter shall have walls of solid masonry or reinforced concrete not less than 100 millimeters thick with lining not less than 100 millimeters of firebrick, which lining shall extend for not less than 12.00 meters above the roof of the combustion chamber. If the design capacity of grate area of such an incinerator exceeds 110 kilograms per hour and 0.80 square meter respectively, walls shall not be less than 200 millimeters thick, lined with not less than 100 millimeters of firebrick extending the full height of the chimney.

#### (3) Linings

Fire clay chimney lining shall not be less than 15 millimeters thick. The lining shall extend from 200 millimeters below the lowest inlet or, in the case of fireplace, from the throat of the fireplace to a point above enclosing masonry walls. Fire clay chimney linings shall be installed ahead of the construction of the chimney as it is carried up, carefully bedded one on the other in fire clay mortar, with close-fitting joints left smooth on the inside. Firebrick not less than 500 millimeters thick may be used in place of fire clay chimney.

#### (4) Area

No chimney passageway shall be smaller in area than the vent connection of the appliance attached thereto.

#### (5) Height

Every masonry chimney shall extend at least 600 millimeters above the part of the roof through which it passes and at least 600 millimeters above the highest elevation of any part of a building within 3.00 meters to the chimney.

#### (6) Corbeling

No masonry chimney shall be corbeled from a wall more than 150 millimeters nor shall a masonry chimney be corbeled from a wall which is less than 300 millimeters in thickness unless it projects equally on each side of the wall. In the second storey of a two-storey building of Group A Occupancy, corbeling of masonry chimneys on the exterior of the enclosing walls may equal the wall thickness. In every case the corbeling shall not exceed 25 millimeters projection for each course of brick.

(7) Change in Size or Shape

No change in the size or shape of a masonry chimney shall be made within a distance of 150 millimeters above or below the roof joints or rafters where the chimney passes through the roof.

(8) Separation

When more than one passageway is contained in the same chimney, masonry separation at least 100 millimeters thick bonded into the masonry wall of the chimney shall be provided to separate passageways.

(9) Inlets

Every inlet to any masonry chimney shall enter the side thereof and shall be of not less than 3 millimeters thick metal or 16 millimeters refractory material.

(10) Clearance

Combustible materials shall not be placed within 50 millimeters of smoke chamber or masonry chimney walls when built within a structure, or within 25 millimeters when the chimney is built entirely outside the structure.

(11) Termination

All incinerator chimneys shall terminate in a substantially constructed spark arrester having a mesh not exceeding 20 millimeters.

(12) Cleanouts

Cleanout openings shall be provided at the base of every masonry chimney.

(b) Fireplaces and Barbecues

Fireplaces, barbecues, smoke chambers, and fireplace chimneys shall be of solid masonry or reinforced concrete and shall conform to the minimum requirements specified in this Code.

(1) Fireplace Walls

Walls of fireplaces shall not be less than 200 millimeters in thickness. Walls of fireboxes shall not be less than 250 millimeters in thickness: *Except*, that where a lining of firebrick is used, such walls

shall not be less than 200 millimeters in thickness. The firebox shall not be less than 500 millimeters in depth. The maximum thickness of joints in firebrick shall be 10 millimeters.

(2) Hoods

Metal hoods used as part of a fireplace or barbecue shall be not less than No. 18 gauge copper, galvanized iron, or other equivalent corrosion-resistant ferrous metal with all seams and connections of smokeproof unsoldered construction. The hoods shall be sloped at an angle of 45 degrees or less from the vertical and shall extend horizontally at least 150 millimeters beyond the limits of the firebox. Metal hoods shall be kept a minimum of 400 millimeters from combustible materials.

(3) Circulators

Approved metal heat circulators may be installed in fireplaces.

(4) Smoke Chamber

Front and sidewalls shall not be less than 200 millimeters in thickness. Smoke chamber back walls shall not be less than 150 millimeters in thickness.

(5) Fireplace Chimneys

Walls of chimneys without flue lining shall not be less than 200 millimeters in thickness. Walls of chimneys with flue lining shall not be less than 100 millimeters in thickness and shall be constructed in accordance with the requirements of this Code.

(6) Clearance to Combustible Materials

Combustible materials shall not be placed within 50 millimeters of fireplace, smoke chamber, or chimney walls when built entirely within a structure, or within 25 millimeters when the chimney is built entirely outside the structure. Combustible materials shall not be placed within 150 millimeters of the fireplace opening. No such combustible material within 300 millimeters of the fireplace opening shall project more than 3 millimeters for each 25 millimeters clearance from such opening. No part of metal hoods used as a part of a fireplace, barbecue or heating stoves shall be less than 400 millimeters from combustible material. This clearance may be reduced to the minimum requirements set forth in this Code.

(7) Area of Flues, Throats, and Dampers

The net cross-sectional area of the flue and of the throat between the firebox and the smoke chamber of a fireplace shall not be less than the requirements to be set forth by the Secretary. Where dampers are used, they shall be of not less than No. 12 gauge metal. When fully opened, damper opening shall be not less than ninety percent of the required flue area. When fully open, damper blades shall not extend beyond the line of the inner face of the flue.

(8) Lintel – Masonry over the fireplace opening shall be supported by a non-combustible lintel.

(9) **Hearth** – Every fireplace shall be provided with a brick, concrete, stone, or other approved non-combustible hearth slab at least 300 millimeters wider on each side than the fireplace opening and projecting at least 450 millimeters therefrom. This slab shall not be less than 100 millimeters thick and shall be supported by a non-combustible material or reinforced to carry its own weight and all imposed loads.

## **SECTION 1212. Fire-Extinguishing Systems**

(a) **Fire-Extinguishing Systems** – Where required, standard automatic fire-extinguishing systems shall be installed in the following places, and in the manner provided in this Code.

(1) In every storey, basement or cellar with an area of 200 square meters or more which is used for habitation, recreation, dining, study, or work, and which has an occupant load of more than 20.

(2) In all dressing rooms, rehearsal rooms, workshops or factories, and other rooms with an occupant load of more than 10 or assembly halls under Group H and I occupancies with occupant load of more than 500, and if the next doors of said rooms are more than 30.00 meters from the nearest safe fire dispersal area of the building or opening to an exit court or street.

(3) In all rooms used for storage or handling of photographic x-ray nitrocellulose films and other inflammable articles.

(b) **Dry Standpipes** – Every building four or more stories in height shall be equipped with one or more dry standpipes.

(1) **Construction and Tests** – Dry standpipes shall be of wrought iron or galvanized steel and together with fittings and connections shall be of sufficient strength to withstand 20 kilograms per square centimeter of water pressure when ready for service, without leaking at the joints, valves, or fittings. Tests shall be conducted by the owner or the building contractor in the presence of a representative of the Building Official whenever deemed necessary for the purpose of certification of its proper function.

(2) **Size** – Dry standpipes shall be of such size as to be capable of delivering 900 liters of water per minute from each of any three outlets simultaneously under the pressure created by one fire engine or pumper based on the standard equipment available.

(3) **Number Required** – Every building four or more storeys in height where the area of any floor above the third floor is 950 square meters or less, shall be equipped with at least one dry standpipe and an additional standpipe shall be installed for each additional 950 square meters or fractional thereof.

(4) **Location** – Standpipes shall be located within enclosed stairway landings or near such stairways as possible or immediately inside of an exterior wall and within 300 millimeters of an opening in a stairway enclosure of the balcony or vestibule of a smokeproof tower or an outside exit stairway.

(5) **Siamese Connections** – Subject to the provisions of the subparagraph (2) all 100 millimeters dry standpipes shall be equipped with a two-way Siamese fire department connection. All 125 millimeter dry standpipes shall be equipped with a three-way Siamese fire department connection and 150 millimeters dry standpipes shall be equipped with a four-way Siamese fire department connections. All Siamese inlet connections shall be located on a street-front of the building and not less

than 300 millimeters nor more than 1.20 meters above the grade and shall be equipped with a clapper-checks and substantial plugs. All Siamese inlet connections shall be recessed in the wall or otherwise substantially protected.

(6) Outlets – All dry standpipes shall extend from the ground floor to and over the roof and shall be equipped with a 63 millimeters outlet not more than 1.20 meters above the floor level at each storey. All dry standpipes shall be equipped with a two-way 63 millimeters outlet above the roof. All outlets shall be equipped with gate valves.

(7) Signs – An iron or bronze sign with raised letters at least 25 millimeters high shall be rigidly attached to the building adjacent to all Siamese connections and such signs shall read: “CONNECTION TO DRY STANDPIPE”.

(c) Wet Standpipes – Every Group H and I Occupancy of any height, and every Group C Occupancy of two or more storeys in height, and every Group B, D, E, F, and G Occupancy of three or more storeys in height and every Group G and E Occupancy over 1,800 square meters in area shall be equipped with one or more interior wet standpipes extending from the cellar or basement into the topmost storey: *Provided*, that Group H buildings having no stage and having a seating capacity of less than 500 need not be equipped with interior wet standpipes.

(1) Construction – Interior wet standpipes shall be constructed of the same materials as those required for dry standpipes.

(2) Size

(2.1) Interior wet standpipes shall have an internal diameter sufficient to deliver 190 liters of water per minute under 2.0 kilograms per square centimeter pressure at the hose connections. Buildings of Group H and I Occupancy shall have wet standpipes systems capable of delivering the required quantity and pressure from any two outlets simultaneously; for all other occupancies only one outlet need be figured to be opened at one time. In no case shall the internal diameter of a wet standpipe be less than 50 millimeters, except when the standpipe is attached to an automatic fire-extinguishing system.

(2.2) Any approved formula which determine pipe sizes on a pressure drop basis may be used to determine pipe size for wet standpipe systems. The Building Official may require discharge capacity and pressure tests on completed wet standpipe systems.

(3) Number Required – The number of wet standpipes when required in this Code shall be so determined that all portions of the building are within 6.00 meters of a nozzle attached to a hose 23.00 meters in length.

(4) Location – In Group H and I Occupancies shall be located as follows: one on each side of the stage, one at the rear end of the auditorium, and one at the rear of the balcony. Where occupant loads are less than 500 the above requirements may be waived: *Provided*, that portable fire-extinguishers of appropriate capacity and type are installed within easy access from the said locations. In Group B, C, D, E, F, and G Occupancies, the location of all interior wet standpipes shall be in accordance with the requirement for dry standpipes: *Provided*, that at least one standpipe is installed to cover not more than 650 square meters.

(5) Outlets. All interior wet standpipes shall be equipped with a 38 millimeter valve in each storey, including the basement or cellar of the building, and located not less than 300 millimeters nor more than 1.20 meters above the floor.

(6) Threads. All those threads used in connection with the installation of such standpipes, including valves and reducing fittings shall be uniform with that prescribed by the Secretary.

(7) Water Supply. All interior wet standpipes shall be connected to a street main not less than 100 millimeters in diameter, or when the water pressure is insufficient, to a water tank of sufficient size as provided in subparagraph (8). When more than one interior wet standpipe is required in the building, such standpipe shall be connected at their bases or at their tops by pipes of equal size.

(8) Pressure and Gravity Tanks – Tanks shall have a capacity sufficient to furnish at least 1,500 liters per minute for a period not less than 10 minutes. Such tanks shall be located so as to provide not less than 2 kilograms per square centimeter pressure at the topmost base outlet for its entire supply. Discharge pipes from pressure tanks shall extend 50 millimeters into and above the bottom of such tanks. All tanks shall be tested in place after installation and proved tight at a hydrostatic pressure fifty percent in excess of the working pressure required. Where such tanks are used for domestic purposes the supply pipe for such purposes shall be located at or above the center line of such tanks. Incombustible supports shall be provided for all such supply tanks and not less than a 900 millimeters clearance shall be maintained over the top and under the bottom of all pressure tanks.

(9) Fire pumps. Fire pumps shall have a capacity of not less than 1,000 liters per minute with a pressure not less than 2 kilograms per square centimeter at the topmost hose outlet. The source of supply for such pump shall be a street water main of not less than 100 millimeters diameter or a well or cistern containing a one-hour supply. Such pumps shall be supplied with an adequate source of power and shall be automatic in operation.

(10) Hose and Hose Reels – Each hose outlet of all interior wet standpipes shall be supplied with a hose not less than 38 millimeters in diameter. Such hose shall be equipped with a suitable brass or bronze nozzle and shall be not over 23.00 meters in length. An approved standard form of wall hose reel or rack shall be provided for the hose and shall be located so as to make the hose readily accessible at all times and shall be recessed in the walls or protected by suitable cabinets.

(d) Basement Pipe Inlets – Basement pipe inlets shall be installed in the first floor of every store, warehouse, or factory where there are cellars or basements under same: *Except*, where in such cellars or basements there is installed a fire-extinguishing system as specified in this Code or where such cellars or basements are used for banking purposes safe deposit vaults, or similar uses.

(1) Material – All basement pipe inlets shall be of cast iron, steel, brass, or bronze with lids of cast brass or bronze and shall consist of a sleeve not less than 200 millimeters in diameter through the floor extending to and flush with the ceiling below and with a top flange, recessed with an inside shoulder, to receive the lid and flush with the finished floor surface. The lid shall be a solid casting and shall have a ring lift recessed on the top thereof, so as to be flushed. The lid shall have the words “FOR FIRE DEPARTMENT ONLY, DO NOT COVER UP” cast on the top thereof. The lid shall be installed in such a manner as to permit its removal readily from the inlet.

(2) Location. Basement pipe inlets shall be strategically located and kept readily accessible at all times to the Fire Department.

(e) Approval – All fire-extinguishing systems, including automatic sprinklers, wet and dry standpipes, automatic chemical extinguishers, basement pipe inlets, and the appurtenances thereto shall meet the approval of the Fire Department as to installation and location and shall be subject to such periodic tests as it may require.

### **SECTION 1213. Stages and Platform**

(a) Stage Ventilators – There shall be one or more ventilators constructed of metal or other incombustible material near the center and above the highest part of any working stage raised above the stage roof and having a total ventilation area equal to at least five percent of the floor area within the stage walls. The entire equipment shall conform to the following requirements:

(1) Opening Action – Ventilators shall open by string action or force of gravity sufficient to overcome the effects of neglect, rust, dirt, or expansion by heat or warping of the framework.

(2) Glass – Glass, if used in ventilators, must be protected against falling on the stage. A wire screen, if used under the glass, must be so placed that if clogged it cannot reduce the required ventilating area or interfere with the operating mechanism or obstruct the distribution of water from the automatic fire extinguishing systems.

(3) Design – Ventilators, penthouses, and supporting framework shall be designed in accordance with this Code.

(4) Spring Actuation – Springs, when employed to actuate ventilator doors, shall be capable of maintaining full required tension indefinitely. Springs shall not be stressed more than fifty percent of their rated capacity and shall not be located directly in the air stream, nor exposed to elements.

(5) Location of Fusible Links – A fusible link shall be placed in the cable control system on the underside of the ventilator at or above the roof line or as approved by the Building Official, and shall be so located as not to be affected by the operation of fire-extinguishing systems.

(6) Control – Remote, manual, or electrical control shall provide for both opening and closing of the ventilator doors for periodic testing and shall be located at a point on the stage designated by the Building Official. When remote control of ventilator is electrical, power failure shall not affect its instant operation in the event of the fire. Hand winches may be employed to facilitate operation of manually controlled ventilators.

(b) Gridirons –

(1) Gridirons, fly galleries, and pin-rail shall be constructed of incombustible materials and fire protection of steel and iron may be omitted. Gridirons and fly galleries shall be designed to support a live load of not less than 367 kilograms per square meter. Each loft block well shall be designed to support 373 kilograms per linear meter and the head block well shall be designed to support the aggregate weight of all the loft block wells served. The head block well must be provided with an adequate strongback or lateral brace to offset torque.

(2) The main counterweight sheave beam shall be designed to support a horizontal and vertical uniformly distributed live load sufficient to accommodate the weight imposed by the total number of loft blocks in the gridiron. The sheave blocks shall be designed to accommodate the maximum load for the loft or head blocks served with a safety factor of five.

(c) Rooms Accessory to Stage – In the building having a stage, the dressing room sections, workshops, and storerooms shall be located on the stage side of the proscenium wall and shall be separated from each other and from the stage by not less than a One-Hour Fire-Resistive Occupancy Separation.

(d) Proscenium Walls – A stage shall be completely separated from the auditorium by a proscenium wall of not less than two-hour incombustible construction. The proscenium wall shall extend not less than 1.20 meters above the roof over the auditorium. Proscenium walls may have, in addition to the main proscenium openings, one opening at the orchestra pit level and not more than two openings at the stage floor level, each of which shall be not more than 2.00 square meters in area. All openings in the proscenium wall of stage shall be protected by a fire assembly having a one and one-half-hour fire-resistive rating. The proscenium opening, which shall be the main opening for viewing performances, shall be provided with a self closing fire-resistive curtain as specified in this Code.

(e) Stage Floor – The type of construction for stage floors shall depend upon the requirements based on the type of Occupancy and the corresponding fire-resistive requirements. All parts of the stage floor shall be designed to support not less than 620 kilograms per square meters. Openings through the stage floors shall be equipped with tight-fitting trap doors of wood of not less than 50 millimeters nominal thickness.

(f) Platforms – The type of construction for platforms shall depend upon the requirements based on the Type of Occupancy and corresponding fire-resistive requirements. Enclosed platforms shall be provided with one or more ventilators conforming to the requirements of stage ventilators: *Except*, that the total area shall be equal to five percent of the area of the platform. When more than one ventilator is provided, they shall be so spaced as to provide proper exhaust ventilation. Ventilators shall not be required for enclosed platforms having a floor area of 45.00 square meters or less.

(g) Stage Exits – At least one exit not less than 900 millimeters wide shall be provided from each side of the stage opening directly or by means of a passageway not less than 900 millimeters in width to a street or exit court. An exit stair no less than 750 millimeters wide shall be provided for egress from each fly gallery. Each tier of dressing rooms shall be provided with at least two means of egress each not less than 750 millimeters wide and all such stairs shall be constructed in accordance with the requirement specified in this Code. The stairs required in this Sub-section need not be enclosed.

#### **Section 1214. Motion Picture Projection Rooms**

(a) General Requirements – The provisions of this Section shall apply only where ribbon type motion picture films in excess of 22-millimeter width and electrical projection equipment are used. Every motion picture machine using ribbon type film in excess of 22 millimeter width and electric arc projections equipment, together with all electrical devices, rheostats, machines, and all such films present in any Group C, I, or H Occupancy shall be enclosed in a projection room large enough to permit the operator to walk freely on either side and back of the machine.

(b) Construction – Every projection room shall be of not less than one-hour fire-resistive construction throughout and the walls and ceiling shall be finished with incombustible materials. The ceiling shall be not less than 2.40 meters from the finished floor. The room shall have a floor area of not less than 7.00 square meters and 3.50 square meters for each additional machine.

(c) Exit – Every projection room shall have at least two doorways separated by not less than one-third the perimeter of the room, each at least 750 millimeters wide and 2.00 meters high. All entrances to a projection room shall be protected by a self-closing fire assembly having a three-fourths hour fire-resistive rating. Such doors shall open outward and lead to proper exits as required in this Code and shall not be equipped with any latch. The maximum width of such door shall be 750 millimeters.

(d) Ports and Openings – Ports in projection room walls shall be of three kind: projection ports; observation ports; and combination ports used for both observation and for stereopticon, spot or floodlight machines.

(1) Ports Required – There shall be provided for each motion picture projector not more than one projection port, which shall be limited in an area to 750 square centimeters, and not more than one observation port, which shall be limited in area to 1,300 square centimeters. There shall be not more than three combination ports, each of which shall not exceed 750 millimeters by 600 millimeters. Each port opening shall be completely covered with a pane of glass: *Except*, that when acetate safety film is used, projection ports may be increased in size to an area not to exceed 4,500 square centimeters.

(2) Shutters – Each port and every other opening in projection room walls, including, any fresh-air inlets but excluding exit doors and exhaust ducts, shall be provided with a shutter of not less than 2.4 millimeters thick sheet metal or its equivalent large enough to overlap at least 25 millimeters on all sides of such openings. Shutters shall be arranged to slide without binding in guides constructed of material equal to the shutters in strength and fire-resistance. Each shutter shall be equipped with a 74° fusible link, which when fused by heat will cause closure of the shutter by gravity. Shutters of a size greater than 1,300 square centimeters shall be equipped with a counter-balance. There shall also be a fusible link located over the upper magazine of each projector, which upon operating, will close all the shutters simultaneously from any projector head and from a point within the projection room near each exit door. Shutters on openings not in use shall be kept closed: *Except*, that shutters may be omitted when only acetate safety film is used.

(e) Ventilation –

(1) Inlet – A fresh-air inlet from the exterior of the building not less than 900 square centimeters and protected with wire netting, shall be installed within 50 millimeters of the floor in every projection room, the source of which shall be remote from other outside vents or flues.

(2) Outlets – Ventilation shall be provided by one or more mechanical exhaust systems which shall draw air from each arc lamp housing to out-doors either directly or through an incombustible flue used for no other purpose. Exhaust capacity shall not be less than 0.50 cubic meter nor more than 1.40 cubic meter per minute for each arc lamp plus 5.60 cubic meters for the room itself. Systems shall be controlled from within the enclosure and shall have pilot lights to indicate operation. The exhaust systems serving the projection room may be extended to cover rooms associated therewith such as rewind rooms. No dampers shall be installed in such exhaust systems. Ventilation of these rooms shall

not be connected in any way with ventilating or air-conditioning systems serving other portions of the building. Exhaust ducts shall be of incombustible material and shall either be kept 25 millimeters from combustible material or covered with 10 millimeters of incombustible heat-insulating material.

(f) Regulation of Equipment – All shelves, fixtures, and fixed equipment in a projection room shall be constructed of incombustible materials. All films not in actual use shall be stored in metal cabinets having individual compartments for reels or shall be in generally accepted shipping containers. No solder shall be used in the construction of such cabinets .

### **SECTION 1215. Lathing, Plastering, and Installation of Wall Boards**

The installation of lath, plaster and gypsum wall shall conform to the fire-resistive rating requirements and the type of construction of building.

## **CHAPTER 13**

### **ELECTRICAL AND MECHANICAL REGULATIONS**

#### **SECTION 1301. Electrical Regulations**

All electrical systems, equipment and installation mentioned in this Code shall conform to the provisions of the Philippine Electrical Code, as adopted by the Board of Electrical Engineering pursuant to Republic Act No. 184 otherwise known as the Electrical Engineering Law.

#### **SECTION 1302. Mechanical Regulations**

All mechanical systems, equipment and installations mentioned in this Code shall conform to the provisions of the Philippine Mechanical Engineering Code, as adopted by the Board of Mechanical Engineering pursuant to Commonwealth Act No. 294 as amended, otherwise known as the Mechanical Engineering Law.

## **CHAPTER 14**

### **PHOTOGRAPHIC AND X-RAY FILMS**

#### **SECTION 1401. Storage and Handling**

(a) Storage rooms of unexposed photographic and x-ray films shall be provided with automatic fire extinguishing systems in the following cases:

(1) When unexposed films in generally accepted safety shipping containers exceed the aggregate of 14.00 cubic meters.

(2) Where shelving used for storage of individual packages not in said shipping containers exceeds 1.40 cubic meters in capacity; and

(3) Storage is not in generally accepted safety shipping containers in any section not exceeding 14.00 cubic meters.

(b) Film negatives in storage or in process of handling shall be kept in heavy Manila envelopes, not exceeding 12 films to an envelope. Expanding envelopes shall not be used.

(c) Film negatives shall be kept in properly insulated vented cabinets, vented storage vaults or outside storage houses. Not more than 110 kilograms shall be stored in any single cabinet. Where the film stored exceeds 450 kilograms, it shall be in vented storage vaults or in a detached structure or roof vault. Door openings in vaults shall be of four-hour fire-resistive construction and shall be kept closed except when in use.

(d) Only incandescent electric light shall be permitted; protected with substantial wire guards or vapor proof globes or both. Portable lights on extension cords are prohibited. Conspicuous "NO SMOKING" signs shall be posted.

(e) No films shall be stored within 600 millimeters of steam pipes, chimneys, or other sources of heat.

(f) There shall be first aid provisions of types using water or water solutions. Discarded films shall be stored and handled in the same manner as other films until removed from the premises.

#### **SECTION 1402. Classes of Film Exempted**

(a) The provisions of this Section do not apply to the following: film for amateur photographic use in original packages of "roll" and "film pack" films in quantities of less than 1.40 cubic meters; safety film; dental X-ray film; establishments manufacturing photographic films and their storage incidental thereto and films stored or being used in standard motion picture booths.

(b) Photographic X-ray film may be identified by the marking on the edge of the film.

#### **SECTION 1403. Fire Extinguishing System**

Unless otherwise provided in this Code, all fire extinguishing systems when so required shall be of a type, specifications, and methods of installation as prescribed in accordance with the requirements of the Secretary.

## **CHAPTER 15**

## **PRE-FABRICATED CONSTRUCTION**

### **SECTION 1501. Prefabricated Assembly**

(a) Prefabricated assembly is a structural unit, the integral parts of which have been built up or assembled prior to incorporation in the building.

(b) The Secretary shall prescribe special tests to determine the structural adequacy, durability, soundness, weather and fire resistance of prefabricated assemblies.

(c) Every device or system to connect prefabricated assemblies shall be capable of developing the strength of the different members as an integral structure, *Except*, in the case of members forming part of a structural frame as specified in this Code. Anchorages and connections between members and the supporting elements of the structure or walls shall be capable of withstanding all probable external and internal forces or other conditions for a structurally adequate construction. In structural design, proper allowances shall be made for any material to be displaced or removed for the installation of pipes, conduits, or other equipment.

(d) Placement of prefabricated assemblies shall be inspected to determine compliance with this Code.

## **CHAPTER 16**

### **PLASTICS**

#### **SECTION 1601. Approved Plastics**

Approved plastic materials shall be those which have a flame-spread rating of 225 or less and a smoke density not greater than that obtained from the burning of untreated wood under similar conditions when tested in accordance with generally accepted engineering practices. The products of the combustion shall not be more toxic than the burning of untreated wood under similar conditions.

#### **SECTION 1602. Installation**

(a) Structural Requirements – All plastic materials shall be of adequate strength and durability to withstand the prescribed design loads. Sufficient and substantial technical data shall be submitted to establish stresses, maximum unsupported spans, and such other information as may be deemed necessary for the various thickness and forms used.

(b) Fastenings – Fastenings shall be adequate to withstand design loads and internal and external stresses required of the assembly. Proper allowances of plastic materials in conjunction with other materials with it is assembled or integrated shall be provided.

### **SECTION 1603. Glazing of Openings**

(a) Doors, sashes and framed openings in exterior walls of all buildings except Types IV and V Constructions may be glazed or equipped with approved plastics: *Provided*, that:

(1) The wall in which such glazing is installed is so located that openings are not required to be fire-protected.

(2) Except for Type I Construction, the location, size, and spacing of such glazed openings do not exceed the values set forth by the Secretary.

(3) Plastics used in glazed openings for Type II Construction shall be materials appropriate for use according to flame-spread characteristics and the location, size, and spacing of the openings do not exceed the values set forth by the Secretary.

### **SECTION 1604. Skylights**

(a) General – Approved plastics may be used in skylights installed on the roofs of Types I, II or III constructions and all buildings in these categories shall be equipped with an approved automatic fire-extinguishing system in Groups A, B, C, E, F, J, H-3 and H-4 Occupancies: *Except*, that:

(1) Approved plastics may be used in any type of construction or occupancy as a fire venting system when approved by the Building Official.

(2) Plastics shall be used in approved skylights in Type II one-hour fire-resistive construction which are located 300 millimeters or more above the lower flange of the ceiling. The walls of the skylight well shall be no less fire-resistive than the adjacent ceiling.

(3) Where a fire-resistive ceiling is not required in one-storey buildings, approved plastics may be used in skylights.

#### **(b) Installation Requirements**

(1) Except in Group A Occupancies, no skylight shall be installed within 3.00 meters of a property line.

(2) The edges of dome-type skylights shall be properly flashed.

(3) Plastic skylights shall be separated from each other by at least 2.50 meters laterally and 3.00 meters along the slope of the roof.

(c) Allowable areas – The area of individual plastic skylights shall not exceed 10.00 square meter. The total aggregate area of plastics used in skylights, monitors, and sawtooth glazing shall not exceed twenty percent of the floor area of the room or occupancy sheltered.

(d) Curb Requirements – Plastic skylights in roofs having a slope less than 1 in 3 shall have a 100 millimeters high curb. The curb may be omitted where a wire screen not smaller than No. 12 U.S.

gauge with a mesh not larger than 25-millimeters is provided immediately below the skylight. The screen shall be substantially mounted below the skylight.

### **SECTION 1605. Light-Transmitting Panels in Monitors and Sawtooth Roofs**

(a) General – Where a fire-resistive rating is not required for the roof structure and in all buildings provided with an approved automatic fire-extinguishing system, approved plastics may be used with or without sash as the light-transmitting medium in monitors and sawtooth; *Except*, that plastics used in monitors or sawtooth roofs of Type II Construction shall be of materials appropriate to be used according to flame-spread characteristics.

(b) Allowable areas – The area of individual plastic glazing used in monitors and sawtooth glazing shall not exceed 15.00 square meters. The total aggregate area of plastics used in skylights, monitors, and sawtooth glazing shall not exceed twenty percent of the floor area of the room or occupancy sheltered.

(c) Area Separation – The area of such plastic panels shall be separated from each other by a section of incombustible material or by a section of the roofing material of the structure not less than 1.50 meters in length.

The lower edge of the plastic material shall be at least 150 millimeters above the surface of the adjoining roof surface.

### **SECTION 1606. Plastic Light Diffusers in Ceilings.**

(a) General – Ceiling light diffusers having an area greater than ten percent of any 10.00 square meters of room area shall be of approved plastics conforming to the requirements specified in this Code.

(b) Installation – Plastic light diffusers shall be installed in such a manner that they will not readily become detached when subjected to room temperature of 80°C for 15 minutes, *Except*, for plastic light diffusers which are installed in the first floor area of Group C Occupancies having egress directly to the exterior of the building; and plastic light diffusers which are located between an approved automatic Fire-extinguishing system and the area to be protected other than public corridors for Group A, B, C, D, E, G, H, and I Occupancies if tests required by the Secretary have established that such installation will not interfere with the efficient operation of such automatic fire-extinguishing systems.

### **SECTION 1607. Partitions**

Where partitions are not required to be of fire-resistive or incombustible construction, approved plastics conforming to the requirements specified in this Code may be used.

### **SECTION 1608. Exterior Veneer**

(a) General

Exterior veneer may be of approved plastic materials, and shall conform to the provisions of this Section.

(b) Height

Plastic veneer shall not be attached to any exterior wall above the first storey: *Provided*, that plastic veneer may be attached to exterior walls above the first storey of buildings located outside of highly restrictive Fire Zones: *Provided*, further that the height of veneer is not in excess of 10.00 meters above the adjacent grade of elevation.

(c) Area

Sections of plastic veneer shall not exceed 15.00 square meters in area, *Except*, that in less restrictive Fire Zones, the area may be increased by fifty percent.

(d) Separation

Sections of plastic veneer shall be separated by a minimum of 1.20 meters vertically and 600 millimeters horizontally.

### **SECTION 1609. Awnings and Canopies**

(a) Plastic materials appropriate for use according to Flame Spread characteristics may be utilized in awnings and canopies, provided such awnings and canopies are constructed in accordance with provisions governing projections and appendages as specified in this Code.

(b) Approved plastics may be used in awnings where untreated canvas is permitted.

(c) Approved plastics may be used in lieu of plain glass in green-houses in less restrictive Fire Zones.

## **CHAPTER 17**

### **SHEET METAL PAINT SPRAY BOOTHS**

#### **SECTION 1701. Sheet Metal Paint Spray Booths**

(a) General

Paint spray booths shall be constructed of steel of not less than No. 18 U.S. gauge in thickness and shall be designed in accordance with this Code.

(b) Area

The area of a paint spray booth shall not exceed 150 square meters nor ten percent of the basic area permitted for the major use of the building according to its Occupancy Group.

(c) Floor Construction

The floor shall be constructed of incombustible material.

(d) Interior Surface

Paint spray booths shall be designed to permit the free passage of exhaust air from all parts of the interior and all interior surfaces shall be smooth and continuous without outstanding edges.

**SECTION 1702. Fire Protection**

Every spray booth having an open front elevation larger than 1.00 square meter and which is not equipped with doors, shall have a fire curtain or metal deflector not less than 100 millimeters deep installed at the upper outer edge of the booth opening.

**SECTION 1703. Light**

Paint spray booths shall be illuminated through hammered wire or heat-treated glass panels. The glass panels shall be located in such a manner as to reduce the hazard of ignition caused by paint spray deposit.

**SECTION 1704. Ventilation**

(a) General

Mechanical ventilation shall be provided direct to the exterior of the building. The mechanical exhaust system shall be designed to move the air through any portion of the paint spray area at the rate of not less than 30.00 lineal meters per minute. The blades of exhaust fans shall be constructed of non-ferrous material and shall be mounted in such a manner as to prevent contact with the exhaust duct. The motor shall not be mounted in the spray booth or the duct system and belts shall be enclosed where they enter the booth or duct system.

(b) Exhaust Ducts

Exhaust ducts shall be constructed of steel having a thickness not less than the values set by the Secretary. The discharge point for ducts in a paint spray booth shall be not less than 2.00 meters from adjoining combustible construction nor less than 8.00 meters from adjoining exterior wall openings: *Except*, that the discharge point for exhaust ducts is not regulated in a waterwash spray booth.

# CHAPTER 18

## GLASS AND GLAZING

### SECTION 1801. General Requirements

(a) This Chapter shall apply to exterior glass glazing in all Occupancies except Groups A, B, and J Occupancies not over three storeys in height, and to interior and exterior glass and glazing in all occupancies subject to human impact as specified in this Code.

(b) Standards for materials shall conform to the provisions set by the Secretary on glass dimensional tolerances, breaking stress levels, and design safety factors.

(c) Each light shall bear the manufacturer's label designating the type and thickness of glass. Each light with special performance characteristics such as laminated, heat strengthened, fully tempered or insulated, shall bear the manufacturer's identification showing the special characteristics and thickness by etching or other permanent identification that shall be visible after the glass is glazed.

### SECTION 1802. Area Lamination

Exterior glass and glazing shall be capable of safely withstanding the load due to wind pressures for various height zones above ground acting inward or outward. The area of individual lights shall not be more than the maximum allowable area of glass according to the wind load multiplied by the appropriate adjustment factor.

### SECTION 1803. Glazing

Glass firmly supported on all four edges shall be glazed with minimum laps and edge clearances in accordance with Section 1801 paragraph (b), *Provided*, that glass edge clearance in fixed openings shall be not less than what is required for wind and earthquake drift. For glass not firmly supported on all four edges and design shall be submitted for approval of the Building Official. Glass supports shall be considered firm when deflection of the support at design load does not exceed 1/175 of the span.

### SECTION 1804. Louvered Windows

Regular plate, sheet, or patterned glass in jalousies and louvered windows shall not be thinner than 5.6 millimeters minimal and not longer than 1.20 meters. Exposed glass edges shall be smooth.

### SECTION 1805. Impact

Frameless glass doors, glass in doors, fixed glass panels, and similar glazed openings which may be subject to accidental human impact shall conform with the requirements set forth by the Secretary on impact loads of glass: *Except* in the following cases;

(1) Bathtub and shower enclosures shall be constructed from approved shatter-resistant materials, such as: wire-reinforced glass not less than 5.6 millimeters thick; fully tempered glass not less than 4.8 millimeters thick; or laminated safety glass not less than 6.4 millimeters thick.

(2) Glass lights located not less than 450 millimeters above the adjacent finished floor walking surface.

(3) Glass lights when the least dimension is not greater than 450 millimeters.

(4) Glass lights 1.50 square meters or less in area.

## **CHAPTER 19**

### **THE USE OF COMPUTERS**

#### **SECTION 1901. General Rule**

The use of computers for all or any part of the design of buildings under this Code is permitted provided that all programs to be used are documented.

#### **SECTION 1902. Program Documentation**

Documenting a program under this Code consists of filing with the Building Official a reference to a publication or publications accessible to him where the detailed description of the program or a brief statement of the theoretical background of the program including a description of the algorithms used as found.

#### **SECTION 1903. Submission of Computer-Generated Computations**

A copy of the output sheets for computer-generated computations shall be submitted as a part of the design computations. The out sheets shall be accompanied by a certification of a designer and/or consultant that the output sheets are the results obtained through the use of documented programs. The certification should include the identification of the specific program used for each portion of the computer-generated computations being submitted.

## **CHAPTER 20**

### **SIGNS**

#### **SECTION 2001. General Requirements**

(a) No sign or signboard shall be erected in such a manner as to confuse or obstruct the view or interpretation of any official traffic sign, signal, or device.

(b) No sign or signboard shall be constructed as to unduly obstruct the natural view of the landscape, distract or obstruct the view of the public as to constitute a traffic hazard, or otherwise defile, debase or offend aesthetic and cultural values and traditions.

### **SECTION 2002. Maintenance**

All signs, together with all of their supports, braces, guys, and anchors, shall be kept in repair and in proper state of preservation. The display of all signs shall be kept neatly painted and secured at all times.

### **SECTION 2003. Design and Construction**

Sign structures shall be designed and constructed to resist all forces in accordance with the National Structural Code for Buildings. For signs on buildings, the dead lateral loads shall be transmitted through the structural frame of the building to the ground in such a manner as not to overstress any of the elements of the building. The weight of earth superimposed over footings may be used in determining the dead load resisting moment. Such earth shall be carefully placed and thoroughly compacted.

### **SECTION 2004. Supports and Anchorages**

(a) General. The supports and anchorages of all signs or sign structures shall be placed in or upon private property and shall be constructed in conformity with the requirements of this Code.

(b) Materials. Materials for construction of signs or sign structures shall be of the quality and grade as specified in this Code.

(c) Restrictions on Combustible Materials – All signs or sign structures erected in highly restrictive Fire Zones shall have structural members of incombustible materials. Ground signs may be constructed of any material meeting the requirements of this Code. Combination signs, roof signs, wall signs, projecting signs, and signs on marquees shall be constructed of incombustible materials. No combustible material other than approved plastics shall be used in the construction of electric signs.

(d) Non-structural Trim – Non-structural trim and portable display surfaces may be of wood, metal, approved plastics, or any combination thereof.

(e) Display Surfaces – Display surfaces in all types of signs may be made of metal, glass, or approved plastics.

### **SECTION 2005. Projections and Clearances**

(a) Clearances from High Voltage Power Lines – Clearances of signs from high voltage power lines shall be in accordance with the Philippine Electrical Code.

(b) Clearances from Fire Escapes, Exits, or Standpipes – No signs or sign structures shall be erected in such a manner that any portion of its surface or supports will interfere in any way with the free use of any fire escape, exit, or standpipe.

(c) Obstruction of Openings. No sign shall obstruct any opening to such an extent that light or ventilation is reduced to a point below that required by this Code. Signs erected within 1.50 meters of an exterior wall in which there are openings within the area of the sign shall be constructed of incombustible material or approved plastics.

(d) Projection Over Alleys. No sign or sign structure shall project into any public alley below a height of 3.00 meters above established sidewalk grade, nor project more than 300 millimeters where the sign structure is located 3.00 meters to 4.5 meters above established sidewalk grade. The sign or sign structure must not project more than 1.00 meter into the public alley where the sign or sign structure is located more than 4.50 meters above established sidewalk grade.

### **SECTION 2006. Lighting**

Signs shall be illuminated only by electrical means in accordance with the Philippine Electrical Code.

## **CHAPTER 21**

### **TRANSITORY AND FINAL PROVISIONS**

#### **SECTION 2101. Existing Building and Structures**

All buildings or structures constructed under R.A. 6541 or existing city or municipal building codes or ordinances, if legally done in accordance therewith, shall be respected subject to such limitations established in this Code.

However, alterations, additions, conversions and/or repairs to be made in such buildings or structures shall be subject to the provisions of this Code.

#### **SECTION 2102. Interim Rules and Regulations**

Interim rules and regulations on buildings promulgated by the Secretary before the adoption of this Code pursuant to existing laws or decrees shall continue to have binding force and effect, when not in conflict with the provisions of this Code.

#### **SECTION 2103. Separability Clause**

If any provision of this Decree or the application thereof is to any person or circumstance declared unconstitutional or invalid for any reason, the same shall not affect the validity of the other provisions.

#### **SECTION 2104. Repealing Clause**

All laws, decrees, provisions of charters, executive orders, ordinances, rules and regulations or parts thereof contrary to or inconsistent with the provisions of this Decree are hereby repealed, amended, or modified accordingly.

**SECTION 2105. Effectivity**

This Decree shall take effect upon its promulgation.

Done in the City of Manila, this 19th day of February, in the year of our Lord, nineteen hundred and seventy seven.

FERDINAND E. MARCOS  
President  
Republic of the Philippines

By the President:

SGD. JUAN C. TIVERA  
Presidential Assistant  
CERTIFIED COPY:

MELQUIADES T. DELA CRUZ CESO II  
Presidential Staff Director  
Malacañang Records Section

**ANNEX "A"**

**WORDS, TERMS AND PHRASES**  
(Definitions)

**ACCESSORIA OR ROW HOUSE**

A house of not more than two storeys, composed of a row of dwelling units entirely separated from one another by party wall or walls and with an independent entrance for each dwelling units.

**ACCESSORY BUILDING**

A building subordinate to the main building on the same lot and used for purposes customarily incidental to those of the main building such as servants quarters, garage, pump house, laundry, etc.

### **AGRICULTURAL BUILDING**

A building designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged; nor shall it be used by the public.

### **ALLEY**

Any public space or thoroughfare which has been dedicated or deeded to the public or public use as a passageway with a width of not more than three meters.

### **ALTER OR ALTERATION**

Any change, addition, or modification in construction of occupancy.

### **APARTMENT**

A room or suite of two or more rooms, designed and intended for, or occupied by one family for living, sleeping, and cooking purposes.

### **APARTMENT HOUSE**

Any building or portion thereof, which is designed, built, rented, leased, let or hired out to be occupied, or which is occupied as the home or residence of three or more families living independently of each other and doing their own cooking in the building, and shall include flats and apartments.

### **ARCADE**

Any portion of a building above the first floor projecting over the sidewalk beyond the first-storey wall used as protection for pedestrians against rain or sun.

### **ASSEMBLY BUILDING OR HALL**

A building or a portion of a building used for gathering together of fifty or more persons for such purposes as deliberation, workshop, entertainment, amusement, or awaiting transportation or of a hundred or more persons in drinking and dining establishments.

### **ATTIC STOREY**

Any storey situated wholly or partly in a roof, so designed, arranged, or built as to be used for business, storage, or habitation.

### **AWNING**

A movable shelter supported entirely from the exterior wall of a building and of a type which can be retracted, folded, or collapsed against the face of a supporting building.

### **BACKING**

The surface or assembly to which veneer is attached.

### **BALCONY**

A portion of the seating space of an assembly room, the lowest part of which is raised 1.20 meters or more above the level of the main floor.

### **BALCONY EXTERIOR EXIT**

A landing or porch projecting from the wall of a building, and which serves as a required means of egress. The long side shall be at least fifty percent open, and the open area above the guardrail shall be so distributed as to prevent the accumulation of smoke or toxic gases.

### **BARBECUE**

A stationary open hearth or brazier, either fuel-fired or electric, used for food preparation.

### **BASEMENT**

A portion of a building between floor and ceiling which is partly below and partly above grade but so located that the vertical distance from the grade to the floor is less than the vertical distance from grade to ceiling.

### **BAY OR PANEL**

One of the intervals or spaces into which the building front is divided by columns, buttresses, or division walls.

### **BOARDING HOUSE**

A house with five or more sleeping rooms where boarders are provided with lodging, and meals for a fixed sum paid by the month, or week, in accordance with previous arrangement.

### **BOILER ROOM**

Any room containing a steam or hotwater boiler.

### **BUILDABLE AREA**

The remaining space in a lot after deducting the required minimum open spaces.

### **BUILDING**

Any structure built for the support, shelter, or enclosure of persons, animals, chattels, or property of any kind.

## **BUILDING HEIGHT**

The vertical distance from the established grade elevation to the highest point of the coping of a flat roof, to the average height of the highest gable or a pitch or hip roof, or to the top of the parapet if the roof is provided with a parapet. In case of sloping ground, the average ground level of the buildable area shall be considered the established grade elevation.

## **BUILDING LENGTH**

Its general linear dimensions usually measured in the direction of the bearing wall for girders.

## **BUILDING WIDTH**

Its shortest linear dimensions usually measured in the direction of the floor, beams or joists.

## **CELLAR**

The portion of a building between floor and ceiling which is wholly or partly below grade and so located that the vertical distance from grade to the floor below is equal to or greater than the vertical distance from grade to ceiling.

## **CHIMNEY CLASSIFICATIONS:**

### **(a) RESIDENTIAL APPLIANCE TYPE**

A factory-built or masonry chimney suitable for removing products of combustion from residential type appliance producing combustion gases not in excess of 538° C measured at the appliance flue outlet.

### **(b) LOW-HEAT APPLIANCE TYPE**

A factory-built masonry or metal chimney suitable for removing the product of combustion from fuel-burning low-heat appliances producing combustion gases not in excess of 538° C under normal operating conditions but capable of producing combustible gases of 760° C during intermittent forced firing for periods up to one hour. All temperatures are measured at the appliance flue outlet.

### **(c) MEDIUM HEAT APPLIANCE TYPE**

A factory built masonry or metal chimney suitable for removing the products of combustion from fuel-burning medium-heat appliances producing combustion gases not in excess of 1093° C measured at the appliance flue outlet.

## **CHIMNEY CONNECTOR**

The pipe which connects a flue-burning appliance to a chimney.

## **CHIMNEY LINER**

The lining materials of fire clay or other approved material.

## **CHIMNEY, MASONRY**

The chimney of solid masonry units bricks, stones, listed hollow unit masonry units, or reinforced concrete.

## **CONCRETE BLOCK**

A hollow or solid concrete masonry unit made from portland cement and suitable aggregates such as sand, gravel, crushed stone, bituminous or anthracite cinders, burned clay, pumice, volcanic scoria, air cooled or expanded blast furnace slags.

## **COPING**

The material or units used to form a cap of finish on top of a wall, pier, or pilaster.

## **CORROSION-RESISTANT**

The non-ferrous metal, or any metal having an unbroken surface of non-ferrous metal, or steel with not less than 10 percent chromium or with less than 0.20 percent copper.

## **CORROSION-RESISTANT MATERIAL**

Materials that are inherently rust-resistant or materials to which an approved rust-resistive coating has been applied either before or after forming or fabrication.

## **COURSE**

A continuous horizontal layer of masonry units.

## **COURT**

An occupied space between building lines and lot lines other than a yard; free, open, and unobstructed by appendages from the ground upward.

## **DISPERSAL AREA (SAFE)**

An area which will accommodate a number of persons equal to the total capacity of the stand and building it serves, in such a manner that no person within the area need be closer than 15.00 meters from the stand or building. Dispersal areas shall be based upon an area of not less than 0.28 square meter per person.

## **DWELLING**

Any building or any portion thereof which is not an “apartment house”, “lodging house”, or a “hotel” as defined in this Code which contains on or two “dwelling units” or “guest rooms”, used, intended or designed to be built, used, rented, leased, let or hired out to be occupied, or which are occupied for living purposes.

### **DWELLING, INDIGENOUS FAMILY**

A dwelling intended for the use and occupancy by the family of the owner only. It is one constructed of native materials such as bamboo, nipa, logs, or lumber, the total cost of which does not exceed fifteen thousand pesos.

### **DWELLING, MULTIPLE**

A building used as a home or residence of three or more families living independently from one another, each occupying one or more rooms as a single housekeeping unit.

### **DWELLING, ONE-FAMILY**

A detached building designated for, or occupied exclusively by one family.

### **DWELLING UNIT**

One or more habitable rooms which are occupied or which are intended or designated to be occupied by one family with facilities for living, sleeping, cooking, and eating.

### **EXIT**

A continuous and unobstructed means of egress to a public way, and shall include intervening doors, doorways, corridors, exterior exit balconies, ramps, stairways, smokeproof enclosures, horizontal exits, exit passageways, exit courts, and yards. An exit shall be deemed to be that point which opens directly into a safe dispersal area or public way. All measurements are to be made to that point when determining the permissible distance of travel.

### **EXIT COURTS**

A yard or court providing egress to a public way for one or more required exits.

### **EXIT, HORIZONTAL**

A means of passage from one building into another building occupied by the same tenant through a separation wall having a minimum fire resistance of one-hour.

### **EXIT PASSAGEWAY**

An enclosed means of egress connecting a required exit or exit court with a public way.

### **FACING**

Any masonry, forming an integral part of a wall used as a finished surface. (as contrasted to veneer, see definition)

### **FIREBRICK**

A refractory brick.

### **FIRECLAY**

A finely ground clay used as a plasticizer for masonry mortars; varies widely in physical properties.

### **FIREPLACE**

A hearth and fire chamber or similarly prepared place in which a fire may be made and which is built in conjunction with a chimney.

### **FIRE RETARDANT TREATED WOOD**

Lumber or plywood impregnated with chemicals and when tested in accordance with accepted fire standards for a period of 30 minutes shall have a flame-spread of not over 25 and show no evidence of progressive combustion. The fire-retardant properties shall not be considered permanent when exposed to the weather.

### **FIRST STOREY**

The storey the floor of which is at or above the level of the sidewalk or adjoining ground, the remaining storeys being numbered in regular succession upward.

### **FLOOR AREA**

The area included within the surrounding exterior walls of a building or portion thereof, exclusive of vent shafts and courts. The floor area of a building or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above.

### **FOOTING**

That portion of the foundation of a structure which spreads and transmits loads directly to the soil or the pile.

### **FOUNDATION**

All the portions of the building or structure below the footing, the earth upon which the structure rests.

### **GARAGE**

A building or portion thereof in which a motor vehicle containing gasoline, distillate, or other volatile, flammable liquid in its tank, is stored, repaired, or kept.

## **GARAGE, COMMERCIAL**

A garage where automobiles and other motor vehicle are housed, cared for, equipped, repaired or kept for remuneration, hire, or sale.

## **GARAGE, OPEN PARKING**

A structure of one or more tiers in height which is at least 50 percent open on two or more sides and is used exclusively for the parking or storage of passenger motor vehicles having a capacity of not more than nine persons per vehicle. Open parking garages are further classified as either ramp-access or mechanical-access. Ramp-access, open parking garages are those employing a series of continuously rising floors permitting the movement of vehicles under their own power from and to the street level. Mechanical access parking garages are those employing parking machines, lifts, elevators, or other mechanical services for vehicles moving from and to street level and in which public occupancy is prohibited above the street level.

## **GARAGE PRIVATE**

A building or a portion of a building in which only motor vehicles used by the tenants of the building or buildings on the premises are stored or kept.

## **GIRDER**

A horizontal structural piece which supports the end of the floor beams or joists or walls over opening.

## **GRADE (ADJACENT GROUND ELEVATION)**

The lowest point of elevation of the finished surface of the ground level between the exterior wall of a building and a point 1.50 meters distant from said wall, or the lowest point of elevation of the finished surface of the ground between the exterior wall of a building and a property line if it is less than 1.50 meters distant from said wall. In case walls are parallel to and within 1.50 meters of a public sidewalk, alley, or other public way, the grade shall be the elevation of the sidewalk, alley, or public way.

## **GROUND FLOOR**

The storey at or near the level of the grade, the other storeys, beginning with second, for the first next above, shall be designated by the successive floor numbers counting upward.

## **GUEST ROOM**

Any room or rooms used, or intended to be used by a guest for sleeping purposes. Every 9.30 square meters of superficial floor area in a dormitory shall be considered to be a guest room.

## **HABITABLE ROOM**

Any room meeting the requirements of this Code for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet room, service rooms, connecting corridors, laundries, unfinished attics, storage, space cellars, utility rooms, and similar spaces.

## **HALL, COMMON**

A corridor or passageway used in common by all the occupants within a building.

## **HALL, STAIR**

A hall which includes the stair, stair landings, and those portions of the common halls through which it is necessary to pass in going between the entrance floor and the room.

## **HELIPORT**

An area of land or water or a structural surface which is used, or intended for use in the landing and take off of helicopters and any appurtenant areas which are used, or intended for use, for heliport buildings and other heliport facilities.

## **HELISTOP**

The same as heliport except that no refueling, maintenance, repairs, or storage of helicopters is permitted.

## **HOTEL**

A building or a part thereof with rooms occupied or intended to be occupied for hire as temporary abiding place of individuals with a general kitchen and public dining room service, but no provision for cooking in any individual suite or room.

## **HOTEL, APARTMENT**

An apartment house which may furnish dining room service and other services for the exclusive use of its tenants.

## **INCOMBUSTIBLE**

As applied to building construction material, as material which, in the form it is used, is either one of the following:

(a) Material having a structural base of incombustible material, with a surfacing material not over 3.2 millimeters thick which has a flame-spread rating of 50 or less.

(b) "Incombustible" does not apply to surface finish materials. Material required to be incombustible for reduced clearance to flues, heating appliances, or other materials shall refer to material conforming to the provisions of the Code. No material shall be classed as incombustible which is subject to increase in combustibility or flame-spread rating beyond the limits herein established, through the effects of age, moisture, or other atmospheric condition.

## **INCOMBUSTIBLE MATERIAL**

When referred to as structural material, means brick, stone, terracotta, concrete, iron, steel, sheet metal, or tiles, used either singly or in combination.

### **INCOMBUSTIBLE ROOFING**

A covering of not less than two thickness of roofing felt and a good coat of tar and gravel or tin, corrugated iron or other approved fire-resisting material with standing seam on lap joint.

### **INCOMBUSTIBLE STUD PARTITION**

A partition plastered on both sides upon metal lath or wire cloth for the full height, and fire-topped between the studs with incombustible material 20 centimeters above the floor and at the ceiling.

### **LINE, BUILDING**

The line formed by the intersection of the outer surface of the enclosing wall of the building and the surface of the ground.

### **LINTEL**

The beam or girder placed over an opening in a wall, which supports the wall construction above.

### **LOAD, DEAD**

The weight of the permanent portions of a building or structure; it includes the weight of the walls, permanent partitions, framing, floors, roofs, and all other permanent and stationary fixtures, mechanism, and other construction entering into and becoming a part of a building or structure.

### **LOAD, LATERAL**

That load caused by winds, earthquakes, or other dynamic forces.

### **LOAD, LIVE**

The weight of the contents of a building or structure; it includes all loads except dead and lateral, and weight of temporary partitions, cases, counters, and similar equipment, and all loads imposed due to the occupancy of the building or structure.

### **LOAD, OCCUPANT**

The total number of persons that may occupy a building or portion thereof at any one time.

### **LODGING HOUSE**

Any building or portion thereof, containing not more than five guest rooms which are used by not more than five guests where rent is paid in money, goods, labor or otherwise.

### **LOT**

A parcel of land on which a principal building and its accessories are placed or may be placed together with the required open spaces. A lot may or may not be the land designated as lot on the recorded plot.

**LOT, CORNER**

A lot situated at the junction of two or more streets forming an angle of not more than one hundred thirty-five degrees (135°).

**LOT, DEPTH OF**

The average horizontal distance between the front and the rear lot lines.

**LOT, FRONT**

The front boundary line of a lot bordering on the street and in the case of a corner lot, it may be either frontage.

**LOT, INSIDE**

A lot fronting on but one street or public alley and the remaining sides bounded by lot lines.

**LOT LINE**

The line of demarcation between either public and private property.

**LOT, OPEN**

A lot bounded on all sides by street lines.

**LOT, WIDTH OF**

The average horizontal distance between the side lot lines.

**MASONRY**

A form of construction composed of stone, brick, concrete, gypsum, hollow clay tile, concrete block or tile, or other similar building units or material or combination of these materials laid up unit and set in mortar.

**MASONRY SOLID**

Masonry of solid units built without hollow spaces.

**MASONRY UNIT**

Brick, block, tile, stone, or other similar building unit or combination thereof, made to be bounded together by a cementation agent.

## **MEZZANINE OR MEZZANINE FLOOR**

A partial intermediate floor in any storey or room of a building having an area not more than one-half of the area of the room or space in which it is constructed.

## **NON-CONFORMING BUILDING**

A building which does not conform with the regulations of the district where it is situated as to height, yard requirement, lot area, and percentage of occupancy.

## **NON-CONFORMING USE**

The use of a building or land or any portion of such building or land which does not conform with the use and regulation of the zone where it is situated.

## **OCCUPANCY**

The purpose for which a building is used or intended to be used. The term shall also include the building or room housing such use. Change of occupancy is not intended to include change of tenants or proprietors.

## **OWNER**

Any person, company, or corporation owning the property or properties under consideration or the receiver or trustee thereof.

## **PANIC HARDWARE**

A bar which extends across at least one-half the width of each door leaf, which will open the door if subjected to pressure.

## **PARTITION**

An interior subdividing wall.

## **PIER**

An isolated mass of masonry forming support for arches, columns, girders, lintels, trusses, and similar structural parts.

## **PILASTER**

A portion of the wall which projects on one or both sides and acts as a vertical beam, a column, or both.

## **PLASTER, PORTLAND, CEMENT**

A mixture of portland cement, or portland cement and lime, and aggregate and other approved material as specified in this Code.

**PLASTICS, APPROVED**

Plastic materials which have a flame spread rating of 225 or less.

**PLATFORM, ENCLOSED**

A partially enclosed portion of an assembly room the ceiling of which is not more than 1.50 meters above the proscenium opening which is designed or used for the presentation of plays, demonstrations, or other entertainment wherein scenery, drops, decorations, of the effects may be installed or used.

**PUBLIC WAY**

A parcel of land unobstructed from the ground to the sky, more than 3.00 meters in width, appropriated to the free passage of the general public.

**REPAIR**

The reconstruction or renewal of any part of an existing building for the purpose of its maintenance. The word "repair" shall not apply to any change of construction.

**SHAFT**

A vertical opening through a building for elevators, dumbwaiters, mechanical equipment, or similar purposes.

**SHOW WINDOW**

A store window in which goods are displayed.

**SLUM**

Blighted Area; Eyesore; An area where the values of real estate tend to deteriorate because of the dilapidated, obsolescent, and insanitary condition of the building within the area. Any eyesore is a building or area which is markedly unpleasant to look at.

**SOCALO, MASONRY**

The wall between the bottom of the window sill and the ground.

**SOFFIT**

The underside of a beam, lintel or reveal.

**STABLE**

Any structure designed and intended for the enclosure, shelter, or protection of any horse, carabao, or other cattle.

## **STABLE, COMMERCIAL**

A stable wherein the animals kept are for business, racing or breeding purposes.

## **STAGE**

A partially enclosed portion of an assembly building which is designed or used for the presentation of plays, demonstrations, or other entertainment wherein the scenery, drops or other effects may be installed or used, and where the distance between the top of the proscenium opening and the ceiling above the stage is more than 1.50 meters.

## **STAIRWAY**

Two or more risers shall constitute a stairway.

## **STAIRWAY, PRIVATE**

A stairway serving one tenant only.

## **STOREY**

That portion of a building included between the upper surface of any floor and the upper surface of the floor next above, except that the topmost storey shall be that portion of a building included between the upper surface of the topmost floor and the ceiling or roof above. If the finished floor level directly above a basement, cellar or unused underfloor spaces more than 3.60 meters above grade as defined herein at any point, such basement, cellar or unused underfloor space shall be considered as a storey.

## **STOREY, HEIGHT OF**

The perpendicular distance from top to top on two successive floors, floor beams, or joints. The clear height of a storey or a room is the distance from the floor to the ceiling. The clear height of balconies is measured from the highest point of the sidewalk grade to the underside of the balcony floor joists. If these joists are sealed, this clear height is measured to the underside of the ceiling.

## **STREET**

Any thoroughfare or public space which has been dedicated or deeded to the public for public use.

## **STRUCTURE**

That which is built or constructed, an ediface or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

## **STRUCTURAL FRAME**

The framing system including the columns and the girders, beams, trusses, and spandrels having direct connections to the columns and all other members which are essential to the stability of the building as a

whole. The members of floor or roof which have no connection to the columns shall be considered secondary and not a part of the structural frame.

## **SUPORTALES**

The vertical supports, such as posts or stanchions, as used in indigenous or traditional type of construction. These may be freestanding as stilts or integrated into the wall structure. In the case of former, pie de gallos (knee braces) or crosettas (cross bracings) are sometimes used.

## **SURFACE, EXTERIOR**

Weather-exposed surface.

## **SURFACE, INTERIOR**

Surfaces other than weather-exposed surfaces.

## **SURFACE, WEATHER-EXPOSED**

All surfaces of walls, ceilings, floors, roofs, soffits, and similar surfaces exposed to the weather except the following:

- (a) Ceiling and roof soffits enclosed by walls, or by beams extend a minimum of 300 millimeters below such ceiling or roof soffits;
- (b) Walls or portions of walls within an unenclosed roof area, when located a horizontal distance from an exterior opening equal to twice the height of the opening; and
- (c) Ceiling and roof soffits beyond a horizontal distance of 3.00 meters from the outer edge of the ceiling or roof soffits.

## **VALUE OR VALUATION OF A BUILDING**

The estimated cost to replace the building in kind, based on current replacement costs.

## **VAULT**

Any surface or underground construction covered on top, or any fire-proof construction intended for the storage of valuables.

## **VENEER ADHERED**

Veneer secured and supported by approved mechanical fasteners attached to an approved backing supported through adhesion to an approved bonding material applied over an approved backing.

## **VENEER, EXTERIOR**

Veneer applied to weather-exposed surfaces.

**veneER, interior**

Veneer applied to surfaces other than weather-exposed surfaces.

**WALL, BEARING**

A wall which supports any load other than its own weight.

**WALL, CROSS**

A term which may be used synonymously with a partition.

**WALL, CURTAIN**

The enclosing wall of an iron or steel framework or the nonbearing portion of an enclosing wall between piers.

**WALL, DEAD**

A wall without openings.

**WALL, EXTERIOR**

Any wall or element of a wall or any number or group of member, which defines the exterior boundaries or courts of a building.

**WALL, FACED**

A wall in which the facing and backing are so bounded together that they act as a composite element, and exert a common action under load.

**WALL, FIRE**

Any wall which subdivides a building so as to resist the spread of fire, by starting at the foundation and extending continuously through all storeys to, or above the roof. Extension above the roof is 1.00 meter.

**WALL, FOUNDATION**

That portion of an enclosing wall below the first tier of floor-joists.

**WALL, HEIGHT OF**

The perpendicular distance measured from its base line either at the grade or at the top of the girder to the top of the coping thereof. Foundation and retaining walls are measured from the grade downward to the base of the footing.

**WALL, NONBEARING**

A wall which supports no load other than its own weight.

**WALL, PARAPET**

That part of any wall entirely above the roof line.

**WALL, PARTY**

A wall separating two or more buildings, and used in common by the said buildings.

**WALL, RETAINING**

Any wall used to resist the lateral displacement of any material; a subsurface wall built to resist the lateral pressure of internal loads.

**WALL, THICKNESS OF**

The minimum thickness measured on the bed.

**WINDOW**

An opening through a wall of a building to the outside air for the purpose of admitting natural light and air.

**WINDOW, ORIEL**

A projecting window similar to a bay window, but carried on bracket or corbels. The term "bay window" may also be applied to an oriel window projecting over the street line.

**WIRE BACKING**

Horizontal strands of taunted wire attached to surfaces of vertical wood supports which, when covered with building paper, provide a backing for portland cement plaster.

**YARD OR PATIO**

The vacant space left in a lot between the building and the property line.

**YARD, REAR**

The yard lying between the side lot lines and the nearest lot line and the nearest building line.

**YARD, SIDE**

The yard lying between the side line and the nearest building and between the front and the rear yards.

**TABLE 708-A. DIMENSION OF WOODEN POSTS OR SUPPORTALES**

Type of Building	Maximum Height of 1st Floor	Maximum Height Total	Maximum Spacing of Post	Required Maximum Finished Size of Suportales
1-Storey Shed		4.00 M	3.50 M	10 cms. x 10 cms.
1-Storey Shed		3.00 M	4.00 M	10 cms. x 10 cms.
1-Storey Shed		5.00 M	4.00 M	12.5 cms. x 12.5 cms.
1-Storey House or Chalet	1.00 to	5.50 M	3.60 M	12.5 cms. x 12.5 cms.
2-Storey House	3.00 M	6.00 M	3.00 M	12.5 cms. x 12.5 cms.
2-Storey House	4.50 M	7.00 M	4.00 M	12 cms. x 15 cms.
2-Storey House	5.00 M	8.00 M	4.50 M	17.5 cms. x 17.5 cms.
2-Storey House		9.00 M	4.50 M	20 cms. x 20 cms.

Logs or tree trunk suportales may be used as post in indigenous traditional type of construction, provided that these are of such sizes and spacing as to sustain vertical loading equivalent at least to the loading capacities of the posts and spacing in this Tables.

**TABLE 1003-A. PROJECTIONS OF BALCONIES AND APPENDAGES**

Width of Streets	Balconies	Total Projections
Over 3.00 m. but less than 6.00 m.	With Balcony	.60 m.
6.00 m. to less than 10.00 m.	With Balcony	.90 m.
10.00 m. to less than 11.00 m.	With Balcony	1.00 m.
11.00 m. to less than 12.00 m.	With Balcony	1.10 m.
12.00 m. to less than 13.00 m.	With Balcony	1.30 m.
14.00 m. to less than 14.00 m.	With Balcony	1.40 m.
14.00 m. or over	With Balcony	1.50 m.

**TABLE 1106-A. TYPE OF PROTECTION REQUIRED FOR PEDESTRIANS**

<b>Height of Construction</b>	<b>Distance from Construction</b>	<b>Protection Required</b>
Eight feet or less	Less than six feet Six feet or more	Railing none
More than eight feet	Less than six feet	Fence and Canopy
	Six feet or more but not more than one-fourth the height of construction	Fence and Canopy
	Six feet or more, but between one-fourth to one half the height of construction	Fence
	Six feet or more but exceeding one-half the construction height	None

Note: All protective devices shall include appropriate lights and warning signs.

# Implementing Rules and Regulations

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## FOREWORD

This “Implementing Rules and Regulations” is a compilation of National Building Code Memorandum Orders issued on various dates by the Minister of Public Works pursuant to Section 211 of the National Building Code (PD 1096). These rules and regulations took effect after three (3) publications in newspapers of general circulation once a week for three consecutive weeks. Included herein are Memoranda of , Circulars and Opinions relevant to the implementation of the Code.

Technological advances and changing economic conditions make imperative the amendment and/or amplification of various parts of these Implementing Rules and Regulations to up-date them and make them relevant to new situations and conditions.

The various previous publications contained and amplifications, supplementary provisions and amendments to suit such conditions. For the purpose of clarity, continuity and homogeneity, the various amplifications, supplementary provisions and amendments have been consolidated, incorporated and inserted into their proper places, and the provisions so amended and/or superseded accordingly dropped.

All changes and/or amendments adopted in these implementing rules and regulations have been made by the Building Research and Development Staff (BRDS) of the Ministry of Public Works for the benefit, safety and welfare of the general public.

With this publication, it is hoped that confusion and ambiguity will be a thing of the past.

**Ministry of Public Works,**

**ALFREDO L. JUNIO**  
Minister

**ABER P. CANLAS**  
Deputy Minister

**TEODORO T. ENCARNACION**  
Assistant Minister  
for Planning  
Management

**ROSALIO A. MALLONGA**  
Assistant Minister  
for Operations

**LIGAYA JORGE**  
Assistant Minister  
for Personnel

and  
Executive Director, BRDS

and  
Development

**ACKNOWLEDGEMENT**

Grateful acknowledgement is given to those who have devoted their precious time and effort and lent their support in formulating these Implementing Rules and Regulations, most especially to the following:

Hon. Rosalio A. Mallonga  
Assistant Minister for Operations  
and  
Executive Director, BRDS

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**Republic of the Philippines**  
**Department of Public Works, Transportation and Communications**  
**OFFICE OF THE SECRETARY**  
**Quezon City**

NBC MEMORANDUM ORDER 77-1

Re: Implementing Rules and Regulations

NATIONAL BUILDING CODE OF THE PHILIPPINES

(P.D. No. 1096)

For the guidance and compliance of all concerned, the following rules and orders are hereby promulgated in initial implementation of the provisions of Presidential Decree No. 1096, otherwise known as the National Building Code of the Philippines:

1. There shall be organized a “Building Research and Development Staff” to serve as the technical staff of the Secretary in the administration and enforcement of the previous provisions of the National Building Code.

2. All Public Works Regional Directors shall serve as coordinators between the Office of the Secretary and the offices of the Building Officials. In behalf of the Secretary, they shall supervise and monitor the work operations of the Building Officials in their respective areas of jurisdiction.

3. Subject to the approval of the Secretary, all duly designated Acting Building Officials shall organize their respective offices in such a manner as to be able to attain the goals and objectives and perform their functions and duties under the Code.

3.1 For purposes of organizing the offices of Building Officials and determining the staffing pattern thereof, districts (provinces) cities and municipalities shall be classified and grouped based on their average annual income for the last three years as follows:

Group I – Shall include all cities and municipalities in Metro-Manila and all first class cities with a minimum income of P10 M and above.

Group II – Shall include all districts (provinces) cities and municipalities with an annual income from P3M to P9.99M.

Group III – Shall include all districts (provinces) cities and municipalities with an annual income not exceeding P 2.99M.

3.2 All positions in the Office of the Building Official shall be occupied by qualified available personnel from within the PW regional, district and city/municipal engineer's offices. Whenever needed, highly qualified professional and/or technical personnel from other government departments/agencies/offices, and/or from the private sector (upon the recommendation of the duly accredited professional organization concerned) may be detailed/designated/appointed as consultants provided all the proper and necessary arrangements therefore shall be done through the DPWTC.

4. The processing of building permits including the use of the prescribed forms therefore shall be in accordance with the corresponding Rule initially promulgated hereunder pursuant to Section 211 of the Code.

5. Likewise, the assessment and schedule of building permits and ancillary permit fees as well as the time and manner of payment thereof shall be in accordance with the Rule on Fees.

6. In the absence of an official Land Use Plan and/or zoning regulations, the interim guidelines provided in Annex B hereof shall be followed.

This order shall take effect on June 16, 1977.

(SGD.) ALFREDO L. JUINIO  
Secretary

## **CLASSIFICATION OF DISTRICTS/CITIES/MUNICIPALITIES\*\***

### **GROUP I**

(All cities and municipalities in Metro-Manila and all first class cities with a minimum income of P10M and above)

#### **CITIES AND MUNICIPALITIES:**

1. Manila
2. Quezon City
3. Caloocan City
4. Pasay City
5. Cebu City\*
6. Davao City\*
7. Olongapo City
8. Bacolod City
9. Zamboanga City\*
10. Baguio City\*
11. Iloilo City\*
12. Toledo City\*
13. Las Piñas, Metro-Manila
14. Makati, Metro-Manila
15. Malabon, Metro-Manila
16. Mandaluyong, Metro-Manila
17. Marikina, Metro-Manila
18. Muntinlupa, Metro-Manila
19. Navotas, Metro-Manila
20. Parañaque, Metro-Manila
21. Pasig, Metro-Manila
22. Pateros, Metro-Manila
23. San Juan, Metro-Manila
24. Taguig, Metro-Manila
25. Valenzuela, Metro-Manila

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\* Cities where the Public Works District Engineer's office is located.

\*\* From the Department of Finance classification of provinces, Sub-provinces, Cities and Municipalities as of August 1, 1975.

## CLASSIFICATION OF DISTRICTS/CITIES/MUNICIPALITIES\*\*

### GROUP II

(All districts, cities and municipalities with an income of P3M to P9.99M)

#### CITIES

- |                         |                                    |
|-------------------------|------------------------------------|
| 1. Cotabato City        | 11. Cadiz City*                    |
| 2. Gen. Santos City*    | 12. Dagupan City*                  |
| 3. Tacloban City*       | 13. Dumaguete City*                |
| 4. Naga City*           | 14. Lapu-Lapu City                 |
| 5. Batangas City        | 15. Legaspi City*                  |
| 6. Cagayan de Oro City* | 16. Mandaue City                   |
| 7. Angeles City         | 17. Ozamis City                    |
| 8. Iligan City*         | 18. San Carlos City (Negros Occ.)* |
| 9. Butuan City*         | 19. San Pablo City*                |
| 10. Cabanatuan City*    | 20. Silay City*                    |

#### DISTRICTS

- |             |                       |
|-------------|-----------------------|
| 1. Albay    | 21. Leyte             |
| 2. Bataan   | 22. Masbate           |
| 3. Batangas | 23. Misamis Oriental  |
| 4. Benguet  | 24. Negros Occidental |
| 5. Bohol    | 25. Negros Oriental   |
| 6. Bukidnon | 26. Nueva Ecija       |

- |                     |                         |
|---------------------|-------------------------|
| 7. Bulacan          | 27. Mindoro Oriental    |
| 8. Cagayan          | 28. Palawan             |
| 9. Camarines Sur    | 29. Pampanga            |
| 10. Capiz           | 30. Pangasinan          |
| 11. Cavite          | 31. Quezon              |
| 12. Cebu            | 32. Rizal               |
| 13. South Cotabato  | 33. Western Samar       |
| 14. Davao del Norte | 34. Sorsogon            |
| 15. Davao del Sur   | 35. Surigao del Sur     |
| 16. Ilocos Norte    | 36. Tarlac              |
| 17. Iloilo          | 37. Zamboanga del Norte |
| 18. Isabela         | 38. Zamboanga del Sur   |
| 19. Laguna          | 39. North Cotabato      |
| 20. La Union        | 40. Ilocos Sur          |

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\* Cities where the Public Works District Engineer's office is located.

\*\* From the Department of Finance classification of provinces, Sub-provinces, Cities and Municipalities as of August 1, 1975.

## **CLASSIFICATION OF DISTRICTS/CITIES/MUNICIPALITIES\*\***

### **GROUP III**

(All districts, cities and municipalities with an income of P1M to P2.99 M)

### **CITIES**

- |                 |                              |
|-----------------|------------------------------|
| 1. Bago         | 15. Marawi*                  |
| 2. Bais         | 16. Ormoc                    |
| 3. Calbayog     | 17. Oroquita*                |
| 4. Canlaon      | 18. Pagadian*                |
| 5. Cavite       | 19. Puerto Princesa*         |
| 6. Danao        | 20. Roxas*                   |
| 7. Dapitan      | 21. San Carlos (Pangasinan)* |
| 8. Dipolog*     | 22. San Jose                 |
| 9. Gingoog      | 23. Surigao                  |
| 10. Iriga       | 24. Tagaytay*                |
| 11. La Carlota* | 25. Tagbilaran*              |
| 12. Laoag*      | 26. Tangub                   |
| 13. Lipa*       | 27. Trece Martires*          |
| 14. Lucena      | 28. Palayan                  |

### **DISTRICTS**

- |                     |                        |
|---------------------|------------------------|
| 1. Abra             | 20. Marinduque         |
| 2. Agusan del Norte | 21. Misamis Occidental |
| 3. Agusan del Sur   | 22. Mt. Province       |
| 4. Aklan            | 23. Siquijor           |
| 5. Antique          | 24. Nueva Ecija        |
| 6. Basilan          | 25. Quirino            |
| 7. Bataan           | 26. Mindoro Occidental |

- |                     |                           |
|---------------------|---------------------------|
| 8. Batanes          | 27. Romblon               |
| 9. Camarines Norte  | 28. Eastern Samar         |
| 10. Camiguin        | 29. Northern Samar        |
| 11. Catanduanes     | 30. Sultan Kudarat        |
| 12. Davao Oriental  | 31. Sulu                  |
| 13. Ifugao          | 32. Surigao del Norte     |
| 14. Ilocos Sur      | 33. Tawi-Tawi             |
| 15. Kalinga-Apayao  | 34. Zambales              |
| 16. Lanao del Norte | 35. Guimaras Sub-Province |
| 17. Lanao del Sur   | 36. Biliran Sub-Province  |
| 18. Southern Leyte  | 37. Aurora Sub-Province   |
| 19. Maguindanao     |                           |

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\* Cities where the Public Works District Engineer's office is located.

\*\* From the Department of Finance classification of provinces, Sub-provinces, Cities and Municipalities as of August 1, 1977

**Republic of the Philippines**

**DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION AND COMMUNICATIONS**

**NIA Building, E. de los Santos Ave., Quezon City**

**OFFICE OF THE SECRETARY**

November 11, 1977

**NBC MEMORANDUM ORDER 77-2**

For the guidance and compliance of all concerned, attached are the latest revisions on NBC Memorandum Order 77-1 together with additional rules and regulations for the implementation of the National Building Code, PD 1096, namely:

1. RULE II

- Annex “B” – Interim guidelines for land use and zoning .....  
(revised)
- 2. Rule III – Assessment, imposition and collection of fees .....  
(revised)
- 3. Rule IV – Disposition of income from fees and other charges .....  
(additional)
- 4. Excerpts from the National Structural Code for Buildings .....  
(additional)

This order shall take effect January 1, 1978.

(SGD.) ALFREDO L. JUINIO  
Secretary

**Republic of the Philippines**  
**DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION AND COMMUNICATIONS**  
**NIA Building, E. de los Santos Ave., Quezon City**  
**OFFICE OF THE SECRETARY**

May 25, 1978

NBC MEMORANDUM ORDER 77-3

For the guidance and compliance of all concerned, attached are additional rules, regulations and standards for the implementation of the National Building Code, PD 1096, namely:

- 1. Rule V – Signs
- 2. Rule VI – Arcades and Sidewalks

3. Rule VII – Abatement/Demolition of Buildings
4. Annex “A-2” – Processing of Applications for Certificate of Occupancy
5. Further Amplification of Sub-section 4.2.2 {Engineering Documents), Sub-sub sections 4.2.2.1 (Structural), 4.2.2.2 (Sanitary/Plumbing), 4.2.2.3 (Mechanical), and 4.2.2.4 (Electrical), of Rule I (Building Permit Applications), Annex “B” Rule I – Open Space and Parking Space Standards.
6. Forms:
  - a) Logbook sheet
  - b) Building Inspection sheet
  - c) Certificate of Inspection and Certificate of Occupancy (For buildings prior to PD 1096)
  - d) Application for Change of Use or Occupancy
  - e) Certificate of Completion (Electrical Works)

This order shall take effect July 1, 1978.

(SGD.) ALFREDO L. JUINIO  
Secretary

**Republic of the Philippines**  
**DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION AND COMMUNICATIONS**  
**NIA Building, E. de los Santos Ave., Quezon City**  
**OFFICE OF THE SECRETARY**

September 18, 1978

NBC MEMORANDUM ORDER 77-4

For the guidance and compliance of all concerned, attached are additional rules, regulations and standards for the implementation of the National Building Code, PD 1096, namely:

1. Rule VIII – Administrative Penalties and Procedures
2. Rule IX – Electrical Regulations
3. Rule X – Mechanical Regulations

4. Rule XI – Access Streets and Alleys
5. Amplification of Section 3, Rule III of the Implementing Rules and Regulations
6. Annex “A-3” – Processing of Application for Certificate of Occupancy for Buildings/structures completed prior to the effectivity of the NBC, PD 1096.
7. Further amplification of Sub-section of Sub-section 4.2.2 (Engineering Documents), Sub-sub section 4.2.2.2 (Sanitary/Plumbing), of Rule I (Building Permit Application)
8. Rule XII – Cemeteries and Memorial Parks
9. Forms:
  - a) Excavation and Ground Preparation Permit
  - b) Sidewalk Construction Permit
  - c) Sign Permit
  - d) Scaffolding Permit
  - e) Temporary Sidewalk Enclosure and Occupancy Permit
  - f) Certificate of Operation: Air Conditioning/Refrigeration
  - g) Certificate of Operation: Internal Combustion Engine
  - h) Certificate of Operation: Elevator
  - i) Certificate of Annual Inspection

This Order shall take effect October 23, 1978.

(SGD.) ALFREDO L. JUIPIO  
Secretary

**NIA Building, E. de los Santos Ave., Quezon City  
OFFICE OF THE SECRETARY**

20 November 1978

**NBC MEMORANDUM ORDER 77-5**

For the guidance and compliance of all concerned, attached are additional rules, regulations and standards for the implementation of the National Building Code, PD 1096, namely:

1. Rule XIII – Handling and Storage of Photographic and X-Ray Films
2. Rule XIV – Occupant Loads
3. Rule XV – Protection and Safety Requirements for Construction and Demolition
4. Rule XVI – Light and Ventilation
5. Rule XVII – Construction of Buildings/Structures Within Approach/Departure Zones of runways of Aerodomes
6. Amendment to Section 3.3.2 of Rule XII – Cemeteries and Memorial Parks
7. Amendment to the Schedule of Fees under Category II for Metro Manila
8. Amplification to Section 6, Rule VIII – Administrative Sanctions and Procedures
9. Supplementary Provisions to Rule V – Signs
10. Supplementary Provisions to Rule IX – Electrical Regulations

This Order shall take effect January 1, 1979.

(SGD.) ALFREDO L. JUINIO  
Secretary

**Republic of the Philippines  
DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION AND COMMUNICATIONS  
NIA Building, E. de los Santos Ave., Quezon City  
OFFICE OF THE SECRETARY**

June 14, 1979

MINISTRY-BRDS )  
Memorandum Order )  
No. 79-1 )  
Series, 1979 )  
x ----- x )  
TO : All Concerned

SUBJECT: Additional Rules, Regulations  
and Standards for the Implement-  
ation of the National Building  
Code, P.D. 1096.

For the guidance and compliance of all concerned, attached are additional rules, regulations and standards for the implementation of the National Building Code, PD 1096, namely:

1. Rule XVIII– Maximum Height of Building/Structures
2. Rule XIX – Parking and Loading Space Requirements
3. Guidelines in the Design of Public Buildings/Structures
4. Amplification of Rule XVII (Construction of Buildings/Structures within Approach/Departure Zones of [Runways of Aerodromes] Airports)
5. Forms:
  - a) Demolition Permit Application
  - b) Demolition Permit
  - c) Demolition Order
  - d) Certificate of Occupancy/Use
  - e) Certificate of Damage
  - f) Certificate of Change of Use/Occupancy
  - g) Repair Order
6. Supplementary Provisions to Rule I – Building permit Applications
7. Supplementary to Rule II – Processing of Applications for Building Permits
8. Supplementary Provisions to Annex “A” – Processing of Applications for Building Permit
9. Supplementary Provisions to Annex “A-1” – Processing of Applications for Sectional Permits.

10. New Provisions on Rule III – Assessment, Imposition and Collection of Fees

11. New Provisions on Rule IX – Electrical Regulations

This Order shall take effect July 16, 1979.

(SGD.) ALFREDO L. JUINIO

Secretary

**Functions, Duties and Responsibilities of a District/City/  
Municipal Building Official**

1. The District/city/Municipal Building Official, who shall be appointed by and under the direct supervision of the Minister of the Ministry of Public Works (MPW), shall be primarily responsible for the enforcement of the provisions of the National Building Code of the Philippines (P.D. 1096) as well as the Implementing Rules and Regulations issued therefor.
2. He shall have overall administrative control and/or supervision over all work pertinent to buildings within his area of responsibility and shall have direct charge of processing of all building permit applications on the basis of land-use and architectural, structural and geodetic (line and grade), sanitary and plumbing, electrical, mechanical and fire as well as other standard requirements, rules and regulations promulgated in accordance with the National Building Code.
3. He shall submit an annual situation report to the Minister of the Ministry of Public Works, (MPW) or his authorized representative on the status of all existing, on-going, and proposed public as well as private building activities within his area and shall undertake an annual inspection of all buildings and keep an up-to-date record of their status in relation to: conformity of use as per zoning regulations and approved permit, architectural or urban design presentability, structural stability and fire protection.
4. He shall review and evaluate the designs, plans, and programs with the corresponding specifications, estimates and other necessary building documents of all building projects under his charge.
5. He shall inspect the construction, repair, addition, renovation and/or demolition of all buildings in accordance with the National Building Code and approved Land-Use or Master Development Plan of the city or municipality and shall have the right to enter into any building, building site, or its surrounding premises and into any new or unoccupied building or building complex. The owner of said building or building complex and building site shall be duly informed of the

findings and recommendations by the Building Official within a reasonable period of time.

6. He shall avail of the assistance and services of the various law-enforcing agencies, if and when deemed necessary, for the effective performance of his duties.
7. He shall see to it that the technical staff charged with the various aspects of administrative control and or supervision of buildings are qualified professionals who are duly registered architects, engineers , master electricians, master plumbers, etc., with a minimum of three (3) years experience in their respective professions or field of specialization.
8. He shall coordinate with the other government officials and officers-in-charge of various aspects of planning and development such as the governor, the city/municipal mayors, the district/city/municipal engineers, the planning and/or development officers and others.
9. He shall keep a permanent record and accurate account of all fees and other charges fixed and authorized to be collected and received under Rule III.
10. Subject to existing budgetary, accounting and auditing rules and regulations, the Building Official shall be authorized to retain not more than twenty percent (20%) of his collection. All income derived from such fees and charges shall not be disposed except in the manner to be determined hereinafter by the Minister. He shall cause the remaining eighty percent (80%) to be deposited with the respective city or municipal treasurer.

**Republic of the Philippines**  
**DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION**  
**& COMMUNICATIONS**  
**NIA Building, E. de los Santos Ave., Quezon City**  
**OFFICE OF THE SECRETARY**

August 11, 1978

Ministry Order)

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No. 44 )

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X ----- X

SUBJECT: OFFICIALS AUTHORIZED TO ACT  
FOR AND IN THE ABSENCE OF

DULY DESIGNATED BUILDING  
OFFICIAL

This Ministry has received strong representation from our District, City and Municipal Engineers who were designated Acting Building Officials, as well as from local executives, to authorize other officials to act for and in their behalf on all matters regarding the enforcement of the provisions of the National Building Code of the Philippines and its implementing rules and regulations, whenever for

valid reasons or causes the said Building Officials are unable to perform their duties. The reason for this is obviously to preclude the piling up of applications for building permits and to avoid unnecessary inconvenience on the part of applicants whom they are bound to serve.

In order, therefore, to meet the exigencies of the service, and to provide continuity of operation and smooth functioning of the Office of the Building Officials, the following guidelines are hereby issued:

1. As a general rule, only the PW District, City or Municipal Engineers duly designated as Acting Building Official in their respective areas of jurisdiction are primarily responsible for the enforcement of the provisions of the National Building Code of the Philippines and its implementing rules and regulations.
2. In the event any of the aforementioned officials is unable to perform the functions of his office for reasons of sickness, absence or for any valid cause, the following officials shall act for and in their behalf:
  - (a). For PW District Engineers designated as Acting Building Officials for all municipalities within their district/province, the Assistant District Engineer;
  - (b). For City Engineers designated as Acting Building Official for any particular city, the Assistant City Engineer should there be one, or in the absence thereof, said city Engineer shall choose between the Engineer in-charge of local projects and the City Public Works Supervisor; and
  - (c). For Municipal Engineers designated as Acting Building Official in their respective municipality, the duly appointed Assistant Municipal Engineer, or in the absence thereof, the Municipal Architect or the nearest City Engineer or District Engineer designated as such Building Official in the city or province as the case may be,

provided that as a matter of policy, the officials so authorized to act for in their absence, aside from being either a licensed Civil Engineer or Architect, must have undergone training on the National Building Code of the Philippines and its implementing rules and regulations.

3. The Officials acting for and in behalf of the duly designated acting Building Official shall thus sign:

For and in the absence of the  
Acting Building Official:  
Signature

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Official Designation

4. In all cases where an official acts for and in the absence of the regularly designated Acting building Official, he shall submit to the latter a report of all the activities undertaken during the incumbent's absence upon his return to office; provided, that in the case of a City Engineer or District Engineer acting for and in behalf of a Municipal Engineer as provided

for under Section 2 (c), he shall furnish the letter with all the documents submitted and approved in connection with the issuance of building permits aside from the required official report of the activities undertaken during the absence of the Municipal Engineer.

- 5. Any action, determination and/or decision made by officials enumerated in Section 2 hereof, in contravention with the provisions of this order shall be deemed null and void.

This order takes effect immediately.

(SGD.) ALFREDO L. JUNIO  
Secretary

**Republic of the Philippines**  
**DEPARTMENT OF PUBLIC WORKS, TRANSPORTATION AND COMMUNICATIONS**  
**NIA Building, E. de los Santos Ave., Quezon City**  
**OFFICE OF THE SECRETARY**

December 28, 1978

MINISTRY ORDER)  
                                  )  
NO.57                          )  
                                  )  
X-----X

SUBJECT: Amending Ministry Order  
          No.44, Series of 1978 Re:  
          Officials authorized to  
          act for and in the absence  
          of the duly designated  
          Building Officials

In view of the multi-faceted functions and responsibilities of our District/City/Municipal Engineer's Offices, particularly in the implementation of the Administration's Infrastructure Programs and considering that the Office of the Building Official needs a fulltime assistant who shall act for and in his absence on all matters regarding the enforcement of the National Building Code of the Philippines and its Implementing Rules and Regulations and to give a wider latitude of discretion to the Acting Building Official in the selection of competent personnel who shall act for and in their absence, item 2 of Ministry Order No.44 dated August 11, 1978 which provides:

“(In the event any of the aforementioned officials is unable to perform the functions of his office for reasons of sickness, absence or for any valid cause, the following officials shall act for in their

behalf:

(a). For PW District Engineers designated as Acting Building Officials for all municipalities within their district/province, the Assistant District Engineer;

(b). For City Engineers designated as Acting Building Official for any particular city, the Assistant City Engineer should there be one, or in the absence thereof, said City Engineer shall choose between the Engineer in-charge of local projects and the City Public Works Supervisor; and

(c). For Municipal Engineers designated as Acting Building Official in their respective municipality, the duly appointed Assistant Municipal Engineer, or in the absence thereof, the Municipal Architect or the nearest City Engineer or District Engineer designated as such Building Official in the city or province as the case may be:

provided that as a matter of policy, the officials so authorized to act for and in their absence, aside from being either a licensed Civil Engineer or Architect, must have undergone training on the National Building Code of the Philippines and its implementing rules and regulations.)”

is hereby amended to read as follows:

X X X X X

2. The District/City /Municipal Engineer designated as such Acting Building Official for any particular District/City/Municipality shall recommend immediately to his Ministry a ranking licensed Architect or Engineer under his direct supervision and control who shall act for and in his behalf whenever he is unable to perform the functions of his Office for reasons of sickness, absence or for any valid cause, provided that pending approval of the designation of the official who shall act for and in his behalf, the provisions of Section 2 of Ministry Order No.44, series of 1978, shall apply in order not to disrupt the service; provided further that as a matter of policy, the officials so authorized to act for in their absence, aside from being either a Licensed Civil Engineer or Architect, must have undergone training on the National Building Code of the Philippines and its Implementing Rules and Regulations.

X X X X X

In this connection, for this Ministry to have a valid basis with which to review the recommendation of the Acting Building Official for a competent officer to act for and in his behalf, it is desired that we be furnished with a copy of the approved position chart of their respective District/City/Municipal Engineering Offices, for our information and guidance.

This order takes effect January 1, 1979.

(SGD.) ALFREDO L. JUINIO  
Secretary

**RULE I – BUILDING PERMIT APPLICATIONS**

## **1. Definitions:**

For purposes of this and other Rules of the following definitions shall apply:

- 1.1 BUILDING PERMIT - A written authorization granted by the Building Official to an applicant allowing him to proceed with the construction of a specific project after plans, specifications and other pertinent documents have been found to be in conformity with the National Building Code (PD 1096) and its Implementing Rules and Regulations. It includes any or all of the Permits enumerated under Section 1 of Rule III.
- 1.2 CONSTRUCTION – All on-site work done from site preparation, excavation, foundation, assembly of all the component and installation of utilities and equipment of buildings/structures.
- 1.3 ERECTION – Installation in place of components of a building/structure.
- 1.4 ADDITION – Any new construction which increases the height or area of an existing building/structures.
- 1.5 ALTERATION – Construction in a building/structure involving changes in the materials used, partitioning, location/size of openings, structural parts, existing utilities and equipment but does not increase the overall area thereof.
- 1.6 RENOVATION – Any Physical change made on a building/structure to increase its value, utility and/or improve its aesthetic quality
- 1.7 CONVERSION – A change in the use or occupancy of a building/structure or any portion/s thereof which has different requirements.
- 1.8 REPAIR – Remedial work done on any damaged or deteriorated portion/s of a building/structure to restore its original condition.
- 1.9 MOVING – The transfer of any building/structure or portion/s thereof from its original location or position to another, either within the same lot or to a different one.
- 1.10 DEMOLITION – The systematic dismantling or destruction of a building/structure, in whole or in part.
- 1.11 ANCILLARY BUILDING/STRUCTURE – A secondary building/structure located within the same premises the use of which is incidental to that of the main building/structure.

## **2. Building Permits:**

No person, firm or corporation, including any agency or instrumentality of the government shall erect, construct, alter, repair, move, convert or demolish any building or structure or cause the same

to be done without first obtaining a building permit therefor from the Building Official assigned in the place where the subject building is located or the building work is to be done.

However, a building permit shall not be required for the following construction and repairs; provided that said constructions or repairs shall not violate any provisions of the Code and its Implementing Rules and Regulations:

a) Minor Constructions:

1. Sheds, outhouses, greenhouses, children's playhouses, aviaries, poultry houses and the like, not exceeding 6 sq.m. in floor area, provided they are completely detached from any other building and are intended only for the private use of the owner.
2. Addition of open terraces or patios resting directly on the ground, not exceeding 20 sq.m. in floor area, exclusively for the private use of the owner.
3. Installation of window grilles.
4. Garden pools for the cultivation of water plants and/or aquarium fish not exceeding 500 millimeters in depth.
5. Erection of garden walls other than party walls not exceeding 1.80 meters in height, cementing of footpaths, garden walks and/or driveways.

b) Repairs:

1. Repair works not affecting or involving any structural member, such as replacement of deteriorated roofing sheets or tiles, gutters, downspouts, fascias, ceilings and/or sidings.
2. Repair of non loading-bearing partition walls.
3. Repairs of any interior portion of a house not involving addition or alteration.
4. Repair and/or replacement of windows.
5. Repair and/or replacement of flooring.
6. Repair of perimeter fences and walls.
7. Repair and/or replacement of sanitary or plumbing fixtures, such as toilet bowls and cisterns, urinals and bidettes, pipes, faucets, valves, water pumps and/or tanks.
8. Repair or replacement of faulty or deteriorated wiring devices, fixtures and safety devices, provided that no alteration shall be made on the service entrance and the main switch or breaker, and that no additional circuits shall be added.

3. **Requirements:**

Any person desiring to obtain a building permit shall file an application therefor in writing and on the prescribed form.

3.1 Together with the accomplished application form the following shall be submitted to the Office of the Building Official:

a) In case the applicant is the registered owner of the lot:

1. Certified true copy of TCT,
2. Tax Declaration, and
3. Current Real Property Tax Receipt.

b) In case the applicant is the registered owner of the lot:

1. Duly notarized copy of the Contract of Lease, or
2. Duly notarized copy of the Deed of Absolute Sale, or
3. Duly notarized copy of the Contract of Sale.

3.2 Five (5) sets of plans and specifications prepared, signed and sealed

- a) by a duly licensed architect or civil engineer, in case of architectural and structural plans;
- b) by a duly licensed sanitary engineer or master plumber, in case of plumbing or sanitary installation plans;
- c) by a duly licensed professional electrical engineer, in case of electrical plans;
- d) by a duly licensed professional mechanical engineer, in case of mechanical plans.

**NOTE:**

Plans and specifications shall not be required for

- a) traditional indigenous family dwellings which are intended for the use and occupancy of the family of the owner only and constructed of native materials such as bamboo, nipa, logs or lumber, the total cost of which does not exceed fifteen thousand pesos (P15,000.00).
- b) single detached dwellings up to 20 sq.m. in floor area.

For any of the above, a simple sketch with dimensions, accompanied by a site location and vicinity map, will suffice.

3.2.1 **Architectural Documents:**

- a) Location of a plan within a two-kilometer radius for commercial, industrial and institutional complex, and within a half-kilometer radius for residential buildings, at any convenient scale.
- b) Site development and/or location plan at scale of 1:200 M standard or any convenient scale for large-scale development showing position of building in relation to lot. Existing buildings within and adjoining the lot shall be hatched, and distances between the proposed and existing buildings shall be indicated.
- c) Floor plans at scale of not less than 1:100 M.
- d) Elevation (at least four) at scale of not less than 1:100 M.
- e) Sections (at least two) at scale of 1:100 M.
- f) Foundation Plan at scale of not less than 1:100 M.
- g) Floor-framing plan at scale of not less than 1:100 M.
- h) Roof-framing plan at scale of not less than 1:100 M.
- i) Details of footing/column at any convenient scale.
- j) Details of structural members at any convenient scale.

### **3.2.1 Engineering Documents:**

#### **3.2.1.1 Structural**

- a) Design analysis shall be required for all buildings or structures except for the following:
  - 1. Traditional indigenous family dwellings as defined in Section 209 of the NBC.
  - 2. Single detached residential buildings with a total floor area up to 20.00 sq.m.

#### **b) Boring and Plate Load Tests**

Pursuant to Section 7.03 (Soil Classification) of the National Structural Code for Buildings, it is the responsibility of the designer to order adequate soil exploration (including test borings for any building or structure of any height, if in his judgement such is necessary. However, as a rule, test borings or plate load tests shall be required for buildings or a structures of four (4) stories and higher.

#### **c) Seismic Analysis**

Pursuant to Section 2.01 (Earthquake Forces) of the National Structural Code for Buildings, every building or structure and every portion thereof, except Category I of Group A Occupancies which are less than 7.5 meters in height, shall be designed and constructed to resist stresses produced by lateral forces.

3.2.1.2 Sanitary/Plumbing:

- a) For new sanitary installation with more than twenty (20) units of plumbing installations, water supply, storm drainage, water purification and sewage treatment plant, applications shall be accompanied by sanitary plans and specifications signed and sealed by a duly licensed Sanitary Engineer containing the following:
  1. Sanitary plan, lay-outs and details.
  2. Isometric drawings of roughing-ins of sanitary drainage, ventilation lines, hot and/or cold distribution /supplies to plumbing fixtures and equipment.
  3. Detail drawings of Imhoff tanks/septic tanks in the absence of disposal to the street sanitary sewer, sewage treatment plant.
  4. Riser diagram of drainage including details of miscellaneous appurtenances such as manholes, junction boxes, catch basins, water/sewer/storm drainage connections.
  5. Design analysis, technical specifications.
  6. Estimate of cost (for statistical purposes only).
  7. Detail drawings of deep well water source and water treatment device in the absence of municipal water system.
  
- b) For additional and/or alteration of existing sanitary installation involving more than twenty (20) units of plumbing installations, water supply, storm drainage, water purification and sewage treatment plant, application shall be accompanied by sanitary plans and specifications signed and sealed by a duly licensed Sanitary Engineer, containing the following:
  1. Design and analysis and plans of the original installation.
  2. Plans and detail drawings of additional installation.
  3. Estimated cost of additional/altered installation (for statistical purposes only).

c) For new sanitary installation with more than twenty (20) units of plumbing installations and water supply, the Engineering Documents signed and sealed by a duly licensed Master Plumber who has been issued a Certificate of Recognition as a Designer by the Board of Master Plumbers include the following:

1. Sanitary plan, layouts and details.
2. Isometric drawings of roughing-ins of ventilation lines, hot and/or cold distribution/supplies to plumbing fixtures and equipment.
3. Design analysis, technical specifications.
4. Estimate of cost (for statistical purposes only).

d) For additional and/or alteration of existing sanitary installation involving more than twenty (20) units of plumbing installations and water supply, the Engineering Documents signed and sealed by a duly licensed Master Plumber, who has been issued a Certificate of Recognition as a Designer by the Board of Master Plumbers, shall include the following:

1. Design and analysis and plans of the original installation.
2. Plans and details drawings of additional installation.
3. Estimated cost of additional/altered installation (for statistical purposes only).

e) For new, additional or altered plumbing installation not exceeding twenty (20) units, the Engineering Documents signed and sealed by a duly licensed Master Plumber shall include the following:

1. Plumbing Plan and Layout.
2. Isometric drawing.
3. Guide specifications and Bill of Materials.
4. Estimate of Cost (for statistical purposes only).

### **3.2.2.3 Mechanical:**

a) The corresponding plans and specifications for 50HP or more, signed and sealed by a duly licensed Professional Mechanical Engineer shall contain the following:

1. General layout plan for each floor, to scale of not less than 1:100 M; indicating the equipment in heavier lines than the building outline. Names of machinery and corresponding brake horsepower shall be indicated.

2. Longitudinal and transverse section drawn to scale of at least 1:100 M showing interfloor relations and defining the manner of support of machinery (weather through building structure, by separate staging, or by foundations resting on the ground).
3. Isometric drawing of piping system showing:
  - a. assembly of pipes on racks and supports.
  - b. complete individual piping system indicating terminal to terminal valves, fittings, sizes and color coding.
4. Plan indicating location of store rooms, fuel tanks, fire extinguishing system, fire doors, fire escapes ladders and other similar fire protective facilities.
5. Plans of all duct work installations, indicating dampers, controls, filters, fireproofing, acoustical and thermal insulation.
6. Detailed plans of machinery foundations and supports drawn to scale of at least 1:50 M.
7. Detailed plans of boilers and pressure vessels with a working pressure of above 10 psig regardless of HP rating drawn to scale of at least P50 M.
8. Computation and detailed plans of elevators, escalators and the like, drawn to scale of at least 1:50 M.
9. Complete machinery list, showing:
  - a. Name and type of machinery
  - b. Make a catalog number, size, model, serial number, capacity
  - c. Revolution per minute (RPM) and drive (direct, V-belt or flat-belt, gear reducer, hydraulic, magnetic, chain or line shafting)
  - d. Motor or Prime Mover, showing
    1. ICE (International Combustion Engine):
      - a. Horsepower (HP) rating
      - b. RPM (Revolution per minute)
      - c. Total Horsepower
      - d. Fuel

e. Use

2. Electric Motor:

a. Horsepower (HP) rating

b. RPM (Revolution per minute)

c. Voltage

d. Chase

e. Cycle

f. Current

g. Kilowatt (KW)

h. Use

10. Flow Sheets

For Processing Plant, Manufacturing Plant for Assembly Plant

b) For all installations, additions or alterations involving machinery of at least 20 HP, the signature of the applicant shall be sufficient.

c) Estimate of cost of installation and equipment shall be submitted.

**3.2.2.4 Electrical:**

a) For new electrical installation with more than twenty (20) outlets or capacity of more than a 4 Kw, of any voltage, application shall be accompanied by electrical plans and specifications signed and sealed by a duly licensed Professional Electrical Engineer, containing the following:

1. General electrical layout with legends

2. Single line diagram

3. Riser diagram

4. Schedule of loads

5. Design analysis

6. Estimate of Cost (for statistical purposes only)

b) For addition and/or alteration of existing installation involving more than 20 outlets or more than 4 KW of any voltage applications shall be accompanied by electrical plans and specifications signed and sealed by a duly licensed Professional Electrical Engineer containing the following:

1. Design analysis of original service entrance equipment, main/feeder branch together with the additional installation.
2. Riser diagram or original and additional installation.
3. Schedule of load of new installation.
4. General electrical layout with legends
5. Estimated cost of new installation and cost of modification (for statistical purposes only).

c) For new, additional or altered electrical installation not exceeding twenty (20) outlets or a capacity of a 4 KW up to 600 volts, application shall be accompanied by a bill of materials and a sketch signed by at least a duly licensed Master Electrician containing the following:

1. Single line diagram of electrical installations
2. General electrical layout, with legends
3. Bill of materials
4. Estimate of Cost (for statistical purposes only)

3.3 Logbook and standard drawing sheets.

3.4 Whenever necessary , written certifications/clearances shall be obtained from the various government authorities exercising regulatory functions affecting buildings and other related structures, such as the

Human Settlements Regulatory Commission (HSRC), for zoning and land use.

National Housing Authority (NHA), for subdivisions and residential condominiums:

National Pollution Control Commission (NPCC), for pollution abatement and control measures.

Ministry of Tourism (MOT), for tourism oriented projects;

Civil Aeronautics Administration (CAA), for height clearance for constructions near airports;

Philippine Ports Authority (PPA), for constructions in port zones, etc.

## **RULE II – PROCESSING OF APPLICATIONS FOR BUILDING PERMITS AND CERTIFICATES OF OCCUPANCY**

Pursuant to Sections 303 to 306, and 309 of the National Building Code (PD 1096) the following procedures shall be followed in the processing of applications for and issuance of Building Permits and Certificates of Occupancy.

### **1. Building Permits**

#### **1.1 Verification of Land Use and Zoning Compatibility:**

The Building Official shall first verify conformity of the proposed building/s or structure/s with the land use plan and zoning regulations of the city/municipality. In the absence of an official Land Use Plan or Zoning Regulations the Interim Guidelines provided in Section \_\_\_\_\_ of this Rule shall be followed.

#### **1.2 Filing of Application:**

1.2.1 When satisfied that all documents, plans and specifications accompanying an application are in order, the Building Official gives due course to the application.

1.2.2 Upon receipt of a application the Building Official refers one (1) set of plans and specifications to the Chief of the Local Fire Service (CLFS) for his evaluation, review and/or recommendation with respect to fire safety and control requirements. The CLFS is given five days to act and submit his report to the Building Official. (Memorandum of Agreement between the Ministry of National Defense (MOND) and the Ministry of Public Works, (MPW).

#### **1.3 Line and Grade Verification**

1.3.1 Building official establishes and/or verifies lot as reflected in the torrens title or TCT and its relation to the proposed building/s.

1.3.2 Building official establishes setbacks and determines grades in relation to road lots, property lines, street or highways whether existing or proposed, as reflected in the land-use, zoning or development plan of the city/municipality including road widening and construction of various public utilities and other infrastructure projects.

## 1.4 Processing of Applications:\*

Corresponding technical staff evaluates building documents as to technical requirement for:

### 1.4.1 Architectural

1.4.1.1 Types of construction (Chapter 4 of the N.B.C.)

1.4.1.2 Requirements of Fire Zones (Chapter 5 of the N.B.C.).

1.4.1.3 Light and ventilation (Chapter 8 of the N.B.C.; Rule XVI, NBC Memorandum Order 77.5).

1.4.1.4 Building projections over public streets (Chapter 10 of the N.B.C.)

1.4.1.5 General design and construction requirements (Chapter 12 of the N.B.C.)

1.4.1.6 Classification and general requirements by use or occupancy (Chapter 7 of the N.B.C.)

1.4.1.7 Signs (Chapter 20 of the N.B.C.; Rule V of the implementing Rules and Regulations)

### 1.4.2 Structural

1.4.2.1 Structural design requirements (National Structural Code for Buildings).

1.4.2.2 Fire resistive requirements in construction (Chapter 6 of the N.B.C.).

1.4.2.3 Excavations, foundations and retaining walls (Section 1202, Chapter 12 of the N.B.C.).

1.4.2.4 The use of computers (Chapter 19 of the N.B.C.).

1.4.2.5 Pre-fabricated construction (Chapter 15 of the N.B.C.).

### 1.4.3 Sanitary/Plumbing

1.4.3.1 Sanitation (Chapter 9 of the N.B.C.)

### 1.4.4 Electrical

1.4.4.1 Electrical regulations (Chapter 13 of the N.B.C.; Rule IX, NBC Memorandum Order 77-4)

### 1.4.5 Mechanical

1.4.5.1 Mechanical regulations (Chapter 13 of the N.B.C.; Rule X, NBC Memorandum Order 77-4)

#### 1.4.6 Fire Safety Control

##### 1.4.6.1 Fire extinguishing systems (Section 1212, Chapter 12 of the NBC.)

\*See flow charts

#### 1.5 Final Evaluation:

1.5.1 Building Official's technical staff prepares assessment of corresponding fees, including the 0.1% Fire Fund Fee (in accordance with the Memorandum of Agreement between the MOND and the MPW, dated August 1, 1978.)

1.5.2 Building Official reviews technical evaluation and assessment of fees, including the Fire Fund Fee.

#### 1.6 Issuance of Building Permit:

1.6.1 When satisfied that the work described in an application for building permit and the plans and specifications submitted herewith, conform to the requirements of the Code as well as of these Rules, the Building Official shall, within fifteen days from payment of the required fees by the applicant, issue the building permit applied for.

1.6.2 The Building Official may issue a permit for the construction of only a part or portion of a building or structure whenever the plans and specifications submitted together with the application do not cover the entire building or structure.

1.6.3 The Building Official may issue a permit to excavate for foundation and basement even while the application is still being processed, and shall charge corresponding fees therefor in accordance with pertinent provisions of Rule III. The fee so collected shall be deducted from the total building permit fees.

#### 1.7 Non-Issuance, Suspension or Revocation of Building Permits:

1.7.1 The Building Official may order or cause the non-issuance, suspension or revocation of building permits on any or all of the following reasons or grounds:

- a. Errors found in the plans and specifications;
- b. Incorrect or inaccurate data or information supplied;
- c. Non-compliance with the pertinent provisions of the Code or of any rule or regulation issued thereunder.

1.7.2 Notice of non-issuance, suspension or revocation of building permits shall always be made in writing, stating the reasons or grounds therefor.

#### 1.8 Terms and Conditions of Permits:

- 1.8.1 Approved plans and specifications upon which the issuance of the permit has been based shall not be changed, modified or altered without the approval of the Building Official and the work shall be done strictly in accordance thereto.
- 1.8.2 The issuance of a building permit shall not be construed as an approval or authorization to the permittee to disregard or violate any of the provisions of the Code.
- 1.8.3 Whenever the issuance of a permit is based on approved plans and specifications which are subsequently found defective, the Building Official is not precluded from requiring permittee to effect the necessary corrections in the said plans and specifications or from preventing or ordering the stoppage of any or all building operations being on thereunder which are not in accordance with the Code and/or Rule.
- 1.8.4 In the actual execution of the project, the architect or civil engineer in charge of the construction work may hire the services of one or more project inspector/s to assist in the full time inspection and supervision of all aspects of the construction. Said project inspector/s must be professional/s who is/are duly registered architect/s, engineer/s, master electrician/s, master plumber/s, etc., qualified in their respective disciplines.
- 1.8.5 The owner shall put up a sign complying with the prescribed dimensions and required information as shown on the illustration on the following page. Such sign shall remain posted on the construction site for the duration of the construction.

#### 1.9 Validity of a Building Permit:

A building permit issued under the provisions of the Code shall expire and become null and void if the building or work authorized therein is not commenced within a period of one year from the date of such permit, or if the building or work so authorized is suspended or abandoned at any time after it has been commenced for a period of 120 days.

## **2. CERTIFICATE OF OCCUPANCY FOR BUILDINGS/STRUCTURES CONSTRUCTED AFTER THE PROMULGATION OF THE NATIONAL BUILDING CODE (PD 1096)**

Pursuant to Section 309 of the National Building Code (PD 1096), no building or structure shall be used or occupied and no change in the existing use or occupancy classification of a building or structure or portion thereof shall be made until the Building Official has issued a Certificate of Occupancy therefor.

2.1 To secure a certificate of occupancy, the following procedure should be followed:

2.1.1 The owner/applicant shall submit to the Building Official the following documents:

- a. Certificate of Completion together with the logbook and the Building Inspection Sheet duly accomplished by the contractor (if the construction is undertaken by contract) and

signed and sealed by the architect or civil engineer in-charge of the construction work. Said architect or civil engineer may hire the services of one or more project inspector/s to assist in the full time inspection and supervision of all aspects by the construction. Said project inspector/s must be qualified professional/s, who is/are duly registered architect/s, master electrician/s, master plumber/s, etc.

- b. As-built plans and specifications jointly signed and sealed by the designing architect or civil engineer and the architect or civil engineer in-charge of the construction and signed by the contractor (if the construction is undertaken by contract) and confirmed by the owner. Said plans and specifications shall reflect faithfully all changes, modifications and alterations made on the originally approved plans and specifications which are the basis of the issuance of the original building permit.

**NOTE:**

Pursuant to Section 304 of the National Building Code, all such changes, modifications and alterations shall likewise be approved by the Building Official and the subsequent amandatory permit therefor issued before any work on said changes, modifications and alterations shall be started. The as-built plans and specifications may be just an orderly and comprehensive compilation of all the documents which include the originally approved plans and specifications and all amendments thereto as actually built or they may be an entirely new set of plans and specifications accurately describing and/or reflecting therein the building as actually built.

- 2.1.2 The Office of the Building Official shall undertake the final inspection, verification and/or review of the building based on the Certificate of Completion, logbook, plans, as built-plans as the case may be, and specifications on the prescribed standard form (see MPW Form No. 77-004-B), according to the following:

- 2.1.2.1 **Land Use**

- a. Conformity with approved Land Use Plan and Zoning Ordinance.

- 2.1.2.2 **Architectural**

- a. Types of Construction (Chapter 4 of the N.B.C.)
- b. Requirements of fire zones (Chapter 5 of the N.B.C.)
- c. Light and ventilation (Chapter 8 of the N.B.C.; Rule XVI, NBC Memorandum Order 77.5)
- d. Building projection over public streets (Chapter 10 of the N.B.C.)
- e. General design and construction requirements (Chapter 12 of the N.B.C.)
- f. Classification and general requirements by use of occupancy (Chapter 7 of the N.B.C.)

- g. Signs (Chapter 20 of the N.B.C., Rule V of the Implementing Rules and Regulations)

2.1.2.3 **Geodetic Engineering**

- a. Compliance with established line and grade.

2.1.2.4 **Structural and Civil Engineering**

- a. Structural design (National Structural Code for Buildings).
- b. Fire-resistive requirements in construction (Chapter 6 of the N.B.C.)
- c. Excavation, foundation and retaining walls (Section 1202 of the N.B.C.)
- d. Pre-fabricated construction (Chapter 15 of the N.B.C.)

2.1.2.5 **Sanitary Engineering and Plumbing**

- a. Sanitation (Chapter 9 of the N.B.C.)

2.1.2.6 **Electrical Engineering**

- a. Electrical regulations (Chapter 13 of the N.B.C.; Rule IX, NBC Memorandum Order 77-4)

2.1.2.7 **Mechanical Engineering**

- a. Fire-extinguishing system (Section 1212, Chapter 12 of the N.V.C.)

2.1.3 Pursuant to the Memorandum of Agreement signed on August 1, 1978 between the MOND and the MPW, the Building Official shall notify the Chief of the Local Fire Service to conduct his final inspection and require him to submit his Fire Safety Inspection Certificate within five (5) working days from receipt of notification. In case of non-issuance, suspension or revocation of said Certificate by the CLFS, he shall so state in writing the reasons or grounds therefor.

**NOTE:**

- a. Said certificate shall be issued by the Chief of the Local Fire Service (CLFS) not later than five (5) working days from referral. If, after the prescribed period, no action is taken by the CLFS, the Building Official may issue the Certificate of the Occupancy with the condition that the fire safety requirements shall be complied with the prescribed period set forth in the Fire Code of the Philippines.
- b. In case of Industrial building/s structures a certificate from the National Pollution Control (NPCC) shall also be required.

- 2.1.4 Building Official's technical staff prepares assessment of fees.
- 2.1.5 Building Official reviews technical evaluation and assessment of fees and orders payment for the full amount of fees.
- 2.1.6 Building Official issues the Certificate of Occupancy in the form prescribed therefor (MPW Form 77- 006-B)
  - 2.1.6.1 A partial Certificate of Occupancy may be issued for the use or occupancy of a portion or portions of a building or structures prior to the completion of the entire building or structures.
  - 2.1.6.2 Pursuant to Section 702 and 703 of the National Building Code, a building for which a Certificate of Occupancy has been issued may further be issued other Certificates of Occupancy due to changes in use, whether partly or wholly, provided, that the new use/s or type/s of occupancy is/are less hazardous based on life and fire risk than the original use or type of occupancy.

### **3. CERTIFICATES OF OCCUPANCY FOR BUILDINGS/STRUCTURES COMPLETED PRIOR TO THE EFFECTIVITY OF THE NATIONAL BUILDING CODE (P.D. 1096)**

For statistical, structural and fire safety and zoning purposes, all buildings or structures constructed and occupied prior to PD 1096, without Certificate of Occupancy shall be required to secure said Certificate.

- 3.1 In order to obtain a Certificate of Occupancy for a building/structure constructed and occupied prior to the promulgation of PD 1096, the following procedure shall be followed:
  - 3.1.1 The owner/applicant shall submit to the Building Official MPW Form No. 77-005-B, duly accomplished under oath together with the following attachments;
    - 3.1.1.1 TCT, tax declaration with current tax receipt, deed or sale, lease contract to purchase, as the case may be, of the lot and/or house.
    - 3.1.1.2 In the case of indigenous family dwellings and house of mixed materials having an area not exceeding forty (40) square meters:
      - a. A simple sketch, signed by the owner or his authorized representative, showing the floor plans and elevations of the house, indicating thereon the dimensions in meters and materials used. For elevations photographs may suffice in place of a sketch.
      - b. Sit plan showing the building in relations to the lot indicating thereon the location and dimensions of courts and yards as well as the firewalls, if any.

- c. Vicinity map showing the street, street intersection and/or easily recognizable landmarks.
  - d. A sketch of the plumbing and electrical systems indicating the number and location of outlets, switches and main circuit breaker.
- 3.1.1.3 In the case of single-detached or duplex family dwellings /living units for the exclusive use of owner/applicant and his family, above forty (40) square meters in area:
- a. As-built plans (Location and Site Plan, Architectural, Electrical, and Sanitary/Plumbing Plans) signed by a duly licensed Architect or Civil Engineer in case of architectural and structural plans, by a duly licensed Professional Electrical Engineer in case of electrical plans, by a duly licensed Sanitary Engineer in case of sanitary or plumbing installations of more than 20 units or Master Plumber in case of sanitary or plumbing installation not exceeding 20 units, by a Sanitary Engineer for sanitary installation of more than 20 units or Master Plumber for Sanitary installation not exceeding 20 units that the sanitary facilities are in order and by a Professional Electrical Engineer that the electrical installation are safe and in accordance with the basic requirements of the NBC.
  - b. A Certificate from a duly licensed Civil Engineer or Architect that the structure is safe, and the fire safety provisions are in order.
- 3.1.1.4 In the case of Category II and III Buildings/Structures (commercial, industrial and institutional buildings including multi-family living units such as accessories, apartments, dormitories, hotels and the like):
- a. TCT, tax declaration with current tax receipts, deed of sale, lease contract or contract to purchase as the case may be, of the lot and/or building/structure.
  - b. As-built plans (Location and Site Plan, Architectural, Electrical, and Sanitary/Plumbing Plans) signed by a duly licensed Architect or Civil Engineer in case of architectural and structural plans, by a duly licensed Professional Electrical Engineer in case of electrical plans, by a duly licensed Professional Mechanical Engineer in case of mechanical plans, by a duly licensed Sanitary Engineer in case of sanitary or plumbing installation of more than 20 units of Master Plumber in case of sanitary or plumbing installations, not exceeding 20 units.
  - c. Certifications from a duly licensed architect and/or civil engineer, electrical engineer, mechanical engineer and sanitary engineer or master plumber that the building/structure is architecturally and structurally sound, and that the electrical, mechanical (if any) and Sanitary/plumbing installations are in order (Refer to prescribed-forms therefor).
  - d. Fire Safety Inspection Certificate issued by the CLFS.

- e. Buildings or houses belonging to Category I (single detached residential and duplex) for the exclusive use of that owner/applicant shall be exempted from payment of fees, provided that the application therefor is filed within two (2) years from the effectivity of this Rule. Failure of house owners to avail of the two (2) year grace period above set forth shall be a ground of the imposition of a fine of P1.00 per square meter of floor area. For buildings/structures belonging to Categories II and III, the fine shall be above. (This two years grace period expires on October 23, 1980).

ANNEX "A-3" – PROCESSING OF APPLICATIONS FOR CERTIFICATE OF OCCUPANCY FOR  
AS AMENDED BUILDING COMPLETED PRIOR TO THE EFFECTIVITY OF THE  
NATIONAL BUILDING CODE (P.D. 1096).

All buildings under Categories II and III in cities and municipalities with building ordinances prior to the promulgation of P.D. 1096, shall be required to secure certificates of occupancy if same are required under the said ordinances.

The following procedures should be followed:

1. The owner/applicant shall submit to the Building Official MPW Form No.77-005-B, duly accomplished under oath together with the following attachments:
  - 1.1 TCT or Real Property Tax Declaration or Deed of Absolute Sale and Tax Receipt for the current year if the lot is owned by the applicant/owner of the building.
  - 1.2 Contract of lease or written consent of the owner/administrator or contract to purchase or certificate of award (in case of government lots) if the applicant is not the owner of the lot
  - 1.3 As-built plans (location and site plan, Architectural, Structural, Electrical, Mechanical, and Sanitary/Plumbing Plans), signed and sealed by a duly licensed Architect or Civil Engineer in case of architectural and structural plans, by a duly licensed Professional Electrical Engineer in case of electrical plans, by a duly licensed Professional Mechanical Engineer in case of mechanical plans, by a duly licensed Sanitary Engineer in case of sanitary or plumbing installation of more than 20 units or Master Plumber in case of sanitary or plumbing installations not exceeding 20 units.

NOTE: If the building/structure is found to be non-conforming with the approved zoning map, the pertinent provisions of the zoning ordinance of the locality shall be applied.

- 1.4 Certifications from a duly licensed Civil Engineer, Electrical Engineer, Mechanical Engineer, Sanitary Engineer or Master Plumber, that the building/structure is structurally safe and the electrical-mechanical and sanitary installation are in order.
- 1.5 Fire Safety Inspection Certificate issued by the Chief of Local Fire Service, INP.
- 1.6 NPCC Certificate in the case of Industrial Buildings.
- 2. The Building Official may inspect the building to confirm the contents of the documents. If the Building Official is satisfied that all requirements have been compiled with, he shall issue the Certificate of Occupancy.
- 3. At the instance of the owner or with his written consent or authorization in each case, buildings under Categories II and III constructed prior to the promulgation of P.D. 1096 in all other Cities and Municipalities without building ordinances or requirements for Certificates of Occupancy, may be issued a Certificate of occupancy by the Building Official following the same procedures enumerated above and after payment of the corresponding fees therefor.
- 4. Building under Category I in all Cities and Municipalities whether or not with an existing building ordinances prior to P.D. 1096, may be issued Certificates of Occupancy by the Building Official at the instance of the owner or upon his written request or authorization provided that the same procedures (1 to 2) above are followed and after payment of the corresponding fees therefor.

FEES:

4.1 Category I (For Metro-Manila and 1st Class Cities)

- a) Buildings with area not exceeding 100 sq. m. . . . . P 50.00
- b) Buildings with area above 100 sq.m. to 200 sq.m. . . . . 75.00
- c) Buildings with area above 200 sq.m. to 300 sq.m. . . . . 100.00
- d) Buildings with area above 300 sq.m. to 500 sq.m. . . . . 200.00
- e) Buildings with area above 500 sq.m. . . . . 400.00

4.2 For all Cities and Municipalities the fees shall be 50% of the above rates.

4.3 Category II (For Metro-Manila and 1st Class Cities)

- a) Buildings with area up to 5,000 sq.m. . . . . 50.00
- b) Buildings with area above 5,000 sq.m. up to . . . . . 100.00  
10,000 sq.m.

c) Buildings with area above 10,000 sq.m. up to . . . . . 20,000 sq.m.	200.00
d) Buildings with area above 20,000 sq.m. up to . . . . . 30,000 sq.m.	400.00
e) Buildings with area above 30,000 sq.m. . . . .	800.00

4.4 For all other Cities and Municipalities the Fees shall be 50% of the above rates.

4.5 Category III (For Metro-Manila and 1st Class Cities)

a) Buildings with area up to 5,000 sq. m. . . . .	30.00
b) Buildings with area above 5,000 sq. m. up to . . . . . 10,000 sq. m.	100.00
c) Buildings with area above 10,000 sq. m. up to . . . . . 20,000 sq. m.	200.00
d) Buildings with area above 20,000 sq. m. up to . . . . . 30,000 sq. m.	300.00
e) Buildings with area above 30,000 sq. m. . . . .	600.00

4.6 For all other Cities and Municipalities the Fees shall be 50% of the above rates.

5. INTERIM GUIDELINES AND LAND DEVELOPMENT

In the absence of an official Land Use Plan, the following guidelines shall be observed:

- 5.1 The Building Official shall determine the major land use pattern in his respective area of jurisdiction in consultation with the Human Settlements Regulatory Commission (HSRC) or the local planning and/or development body. All new building constructions shall conform to this major use pattern.
- 5.2 Any form of land development such as site grading, construction of curbs and gutters, fencing, etc., shall not be allowed unless adequate provisions for environmental protection are made to safeguard the areas adjacent to the proposed development from flooding, pollution and other physical ill effects.
- 5.3 In cases of large-scale land development covering an area of 2,500 square meters or more, the consent of the homeowners and/or barangay association and adjacent property owners shall first be obtained before any permit is issued.
- 5.4 All land development projects covering housing subdivision and residential condominium shall conform to the rules and regulations promulgated under PD 953 and 957 by the National Housing Authority (NHA).(NOTE: Under Executive Order

No. 648 issued by President Marcos on Feb. 8, 1978, the NHA regulatory functions were transferred to the HSRC.)

### **RULE III: ASSESSMENT, IMPOSITION AND COLLECTION OF FEES**

Pursuant to Section 203 of the National Building Code (PD 1096) the Building Official is hereby authorized to collect fees and charges for services rendered in connection with the processing and issuance of the following building permits and the performance of other regulatory functions:

#### **1. Kinds of Permits:**

1.1 Zoning and Land use Verification

1.2 Establishment of Line and Grade

1.3 Excavation and Ground Preparation Permit

1.4 Building Permit, for the construction, erection, addition, alteration, renovation, conversion, repair, moving or demolition of residential, commercial, industrial, institutional, recreational, agricultural, ancillary, temporary and other buildings/structures.

Examples:

- |             |   |
|-------------|---|
| Residential | – Single detached dwellings and duplexes for use of owners, “on-campus” dormitories, rectories, convents and monasteries, residential condominiums owned by occupants, army barracks, etc.  |
| Commercial  | – Single detached dwellings and duplexes for lease, boarding houses, apartments, accesorias, hotels and inns, “off-campus” dormitories, transportation and terminals and stations, night clubs and dance halls, restaurants, markets and shopping centers, theaters, sports stadia, grandstands, gasoline, service stations, parking garages, funeral parlors, etc. |
| Industrial  | – Factories, plants, mills, arsenals, breweries, processing plants, gas generating plants, shipyards, aircraft hangars, slipways, drydocks and piers, lumber mills, warehouse, storage tanks, grain and cement silos, etc.  |

Institutional	– Educational institutions, libraries, museums, clubhouses, hospitals, sanitarium, asylums, homes for the aged, jails, police and fire stations, places of worship, etc.
Recreational etc.	– Cinemas, billiard halls, disco pads, amusement houses, etc.
Agricultural	– Barns, poultry houses, hatcheries, piggeries, stables, greenhouses, granaries, etc.
Ancillary	– Garages, carports, tanks, towers, smokestacks and chimneys, vaults, swimming pools, pelota courts, aviaries, aquariums, zoo structures, fire walls and fences over 1.80 meters in height, etc.
Temporary	– Field offices, laborers' quarters, canopies and railings, protective fencing, etc.
Others	– Cemetery structures such as mausoleums, tombs, multi-level niches, etc.

#### 1.5 Demolition Permit

#### 1.6 Moving Permit

1.7 Sanitary/Plumbing Permit, for the installation, alteration or repair of sanitary, plumbing, water supply and drainage systems.

1.8 Electrical Permit, for the installation, alteration or repair of any electrical system.

#### 1.9 Temporary Service Connection Permit

#### 1.10 Pole/Attachment Location Plan Permit

1.11 Mechanical Permit, for the installation, alteration or repair of elevators, lifts Escalators, dumbwaiters, conveyors, boilers, pumps, fans and blowers, pressure vessels, furnaces, steam or pneumatically activated machinery or heat producing apparatus, air conditioning or refrigerating equipment or plant, including piping or duct work and appurtenances thereto, gas and fuel supply systems, etc.

1.12 Fencing permit, for construction of fences up to 1.80 meters in height and made of materials other than those mentioned in Section 14.1 of this Rule.

#### 1.13 Sidewalk Construction Permit

#### 1.14 Temporary Sidewalk Enclosure and Occupancy Permit

1.15 Scaffolding Permit, for the erection of scaffoldings on public areas.

1.16 Certificate of Use or Occupancy, for full or partial, permanent or temporary use or occupancy and any change of use or occupancy.

1.17 Annual inspection of buildings/structures and their sanitary/plumbing, electrical and mechanical installations, machinery and equipment.

1.18 Sign Permit, for the erection, installation, repair, alteration or removal of signs, as enumerated in Rule V.

1.19 Communications/Electronics Permit

1. **Assesment of building permit fees shall be based on the following:**

1.1 Type of Occupancy or Use of Building

1.2 Cost of Construction\*

1.3 Floor Area

1.4 Hieght

\* Cost of construction is the cost per square meter of floor area of building, based on group classification, as shown in Section 4 of this Rule.

2. **For the purpose of fixing the amount of fees based on the use or occupancy of the building/structure, the group occupancy classification of buildings enumerated in Section 401 of the National Building Code (PD 1096) shall be the term of reference:**

Occupancy groups are classified into five categories, namely:

3.1 CATEGORY I - Residential – This shall comprise Group A and partly Group buildings.

3.2 CATEGORY II - Commercial and Industrial – This shall comprise Groups B, C, E, F, G, H and I buildings.

3.3 CATEGORY III - Social, Educational and Institutional – This shall comprise partly Groups C, D, E and H buildings.

3.4 CATEGORY IV - Agricultural – This shall copmprise Partly J buildings.

3.5 CATEGORY V - Ancillary – This shall comprise partly Group J buildings.

***CLASIFICACION***

**CATEGORY      GROUP      USE OR OCCUPANCY**

Residential

I

A

a. Indigenous family dwelling units.

Residential

b. Single detached dwelling units.

Buildings for

c. Duplexes,

The exclusive

d. School or company staff housing units.

Use of the

e. Church rectories.

Owners or

Non-leasing

A

a. Multiple dwelling units or high rise residential condominiums or tenement houses which are directly owned by / sold to the occupants.

Occupants.

b. School and camp dormitories (on campus).

c. Convents and monasteries.

d. Army barracks.

II

B

a. Leased out single detached dwelling units, cottages with more than one independent sleeping units and duplexes.

Commercial

- b. Boarding or lodging houses.
- c. Accesorias, tenement houses and row houses.
- d. Massage and sauna parlors.
- e. Hotels, motels, inns, pension houses.
- f. Private or “off campus” dormitories.

- 
- C
    - a. Amusement halls and parlors.
    - b. Billiard halls, pool rooms, bowling alleys.
    - c. Health studios, reducing saloons.
    - d. Massage and sauna parlors.
    - e. Dancing schools, disco pads, dance halls.
    - f. Gymnasia and pelota courts.

- 
- E-1
    - a. Gasoline filling and service stations.
    - b. Commercial garages and parking buildings, display garages for cars, tractors, etc.
    - c. Boat storage structures where no work is done except exchange of parts and maintenance requiring no open flame, welding or the use of highly flammable liquids.
    - d. Bus depots and terminals.
    - e. Train stations and terminals.
    - f. Transportation offices.
    - g. Carbarns for street cars and buses.
    - h. Port and harbor facilities, landings, pier sheds, ferry landing stations.
    - i. Airport terminal buildings, heliports.
    - j. Piers and wharves.

- 
- E-2
    - a. General wholesale and retail stores.
      - b. Shopping centers and supermarkets.
      - c. local wet and dry markets.
      - d. Restaurants having an occupant load of less than 100 persons.
      - e. Drinking and dining establishments having an occupant load of less than 100 persons.
      - f. Day and night clubs, bars and cocktail lounges, beer gardens.
      - g. Paint stores without bulk handling.
      - h. Engraving, photo developing and printing shops.
      - i. Photographer and painter studios, tailoring and haberdashery shops.
      - j. Printing and publishing plants offices.
      - k. Office buildings.
      - l. Financial institutions
      - m. Funeral parlors, morgues and crematories.
      - n. Memorial and mortuary chapels.
      - o. Telephone and telegraph exchanges.

- p. Radio and TV broadcasting and transmitting studios.
- q. Battery shops, auto repair shops.
- r. Factories and workshops using non-highly flammable or non-combustible materials.
- s. Bakeries, pastry shops and bakeshops.

- 
- E-3    a. Aircraft hangars.
- b. Open parking garages where no repair work is done except exchange of parts and maintenance requiring no open flame, welding or the use of highly flammable liquids.

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H-1    Assembly buildings with stage and having an Occupant load of less than 1000 in the building:

- a. Theaters and auditoriums.
- b. Concert halls and opera houses.
- c. Convention halls.
- d. Theaters-restaurants.
- e. Little theaters, audio-visual rooms.

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H-2    Assembly buildings without stage and having an Occupant load of 300 or more;

- a. Dance halls, cabarets, ballrooms.
- b. Skating rinks.
- c. Cockfighting arenas.

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H-3    Assembly buildings without stage and having an Occupant load of less than 300:

- a. Dance halls, ball rooms.
- b. Skating rinks.

- 
- H-4    a. Sports stadiums.
- b. Reviewing stands.
  - c. Covered amusement parks.
  - d. Boxing arenas, jai-alai stadiums.
  - e. Race tracks and hippodromes.

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I        Assembly buildings with stage and having an Occupant load of 1000 or more;

- a. Collisea and sports complexes.
- b. Theaters and convention halls.
- c. Concert halls and opera houses.

---

Industrial

- F        a. Ice plants and cold storage plants.

- f. Power plants (thermal, hydro-electric or Geothermal.)
- c. Pumping plants (water supply, storm drainage, sewerage and irrigation.)
- d. Diaries and creameries.
- e. Factories and workshops using incombustible or non-explosive materials.
- f. Rice mills, sugar centrals.
- g. Breweries, bottling pants, canneries and tanneries.

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G-1 Storage and handling of hazardous and highly Flammable materials:

- a. Storage tanks, buildings for storing gasoline, Acetylene, LPG, calcium carbide, oxygen, hydrogen, etc.
- b. Armories and arsenals, munitions factories.
- c. Match factories.
- d. Firewalks factories.
- e. Plastics resins plants (monomer and polymer).
- f. Plastics compounding plants.
- g. Plastics processing plants.
- h. Factories for highly flammable chemicals.
- i. Acetylene, oxygen generating plants.
- j. Cooking oil and soap processing plants.

---

G-2 Storage and handling of flammable materials:

- a. Dry cleaning plants using flammable liquids.
- b. Paint stores with bulk handling.
- c. Paint shops and spray painting rooms.
- d. Sign and billboard painting shops.

---

G-3 a. Wood working establishments, lumber and timber yards.

- b. Planning mills and sawmills, veneer plants.
- c. Wood drying kilns.
- d. Pulp, paper and paper board factories.
- e. Wood and cardoard box factories.
- f. Textile and fiber spinning mills.
- g. Garment and undergarment factories.
- h. Factories where loose combustible fibers or dirt are manufactured, processed or generated.
- i. Warehouses where highly combustible materials are stored.
- j. Grains and cement silos.

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G-4 a. Repair garages and shops.  
b. Shipyards, slipways and drydocks.

- c. Factories for engines and turbines and attached testing facilities.

- 
- G-5 a. Aircraft repair hangars.
  - b. Manufacture and assembly plants, repair and Testing shops for aircraft engines and parts.

III  
Educational,  
Social and  
Institutional  
concert halls.

- 
- C a. Educational institutions (schools, colleges, Universities, vocational schools, seminaries and Novitiates), including school auditoriums, Gymnasia, reviewing stands, little theaters and
  - b. Libraries, museums, exhibition halls and art galleries.
  - c. Civic centers.
  - d. Clubhouses, lodges.
  - e. Community centers.
  - f. Golf club buildings.

- 
- D-1 a. Mental hospitals, mental sanitarium, mental Asylums.
  - e. Jails, prisons, reformatories, correctional Institutions.
  - d. Rehabilitation centers.
  - e. Leprosaria.
  - f. Quarantine stations.

- 
- D-2 a. Nursery schools, nurseries and children's Hospitals for full time care of children below Kindergarten age.
  - k. Hospitals, sanitarium, nursing homes with non – Ambulatory patients.
  - l. Home for the aged.

- 
- D-3 a. Nursing homes for ambulatory patients.
  - b. Kindergarten schools, homes for children of Kindergarten or over.
  - m. Orphanages.

- 
- E-2 a. Police and fire stations.
  - f. Guard houses.

H Churches, mosques, temples, shrines, chapels and Similar places of worship.

IV  
Agricultural

- 
- J-1 Agricultural buildings and sheds, including barns, Poultry houses, piggeries, hatcheries, stables, Cowsheds; also greenhouses, granaries and other

Structures for the storage of agricultural products.

- V  
Ancillary
- J-1 Private garages, carports.
- J-2 a. Fences over 1.80 meters high, separate fire walls
- h. Steel and concrete tanks.
  - i. Towers and silos, smokestacks and chimneys.
  - j. Swimming pools, including shower and locker rooms.
  - k. Stages, platforms and similar structures.
  - l. Pelota courts.
  - m. Aviaries and aquariums, zoo structures.

**3. Regardless of the type of connection, the cost of construction of any building For the purpose of assessing the corresponding permit fees and certificate of Occupancy is hereby fixed as follows:**

**Cost / Square meter**

<b>GROUP</b>	<b>Category I, II, III</b>	<b>Category IV</b>	<b>Category V</b>
I. Metro Manila and First Class Cities.	P 1,000.00	P 200.00	P 500.00
II. Second Class Cities And First Class Municipalities.	800.00	160.00	400.00
III. All Others.	600.00	120.00	300.00

**4. No fees shall be charged on the following applications:**

- 4.1 Construction / addition / renovation / alteration of traditional indigenous family dwelling units as defined under Section 209 of the Code.
- 4.2 Construction / addition / renovation / alteration of public buildings. For purpose Of this rule the terms **“PUBLIC BUILDING OR STRUCTURES”** refers to any Building owned, occupied and operated by regular and / or specialized agencies or offices performing purely governmental functions.
- 4.3 Construction / addition / renovation / alteration introduced or undertaken by The National Housing Authority on government owned tenement houses and Other housing units while the title of the lot is still under the name of government.
- 4.4 Reconstruction of buildings or structures damaged or destroyed by typhoons , fires, earthquakes or other calamities, provided that the cost of such reconstruction shall not exceed twenty percent (20%) of the original construction cost based on the schedule of rates provided in this rule and that an application therefor is filed with the Building Official together with the Certificate of Damage which shall be obtained from the

office of the Building Official not later than thirty (30) days after the occurrence of such calamity.

4.5 Construction of buildings or structures by civic organizations, charitable institutions to be donated to the government for public use.

4.6 Construction / addition / renovation / alteration / repair of buildings / structures and / or electrical equipment / installations owned by electric cooperatives Organized and / or operating pursuant to PD 269. However, individual household members of such cooperatives are not exempt.

**5. Zoning and Land Verification Fee:**

5.1 Metro Manila and First Class Cities:

- a.) Category I .....P 10.00
- b.) Category II ..... 30.00
- c.) Category III ..... 20.00
- d.) Category IV ..... 5.00
- e.) Category V .....accdg. to category of principal building/structure.

5.2 All other cities and municipalities:  
50% of the above rates.

**7. Establishment of Line and Grade:**

7.1 Metro Manila and First Class Cities:

- a.) All sides fronting or abutting-streets, esteros, rivers and creeks:
  - 1. First 10 meters .....P 20.00
  - 2. Every meter or fraction thereof  
In excess of 10 m ..... 1.00
- b.) All other sides:  
Every meter of fraction thereof ..... 0.50

7.2 All other cities and municipalities:  
50% of the above rates.

**8. Schedule of Building Permit Fees:**

8.1 The building Permit Fee includes the excavation fee for the foundation. However, while the application is still being processed, the Building Official may allow excavation for the foundation and basement, for which the following fees shall be charged:

- a.) Excavation for foundation

- Per cu.m. of excavation..... 2.00
- b.) Excavation for basement,  
Per cu.m. of excavation.....2.00

NOTE: The fee paid therefor shall be deducted from the total building permit Fees.

8.2 Construction / addition / renovation / alteration of buildings under CATEGORY I shall be assessed according to the following rates:

A R E A	Metro Manila	2 <sup>nd</sup> Class	All Others	
	1 <sup>st</sup> Class	Cities and Municipalities		
Fee / sq.m.	Fee / sq.m.	Fee / sq.m.	Fee / sq.m.	
a.) Original complete up to 20 sq.m.	Exempted	Exempted	Exempted	construction
b.) Addition/ renovation alteration up to 20 sq.m.	P 2.00	P 1.50	P 1.00	
c.) Above 20 sq.m/ up to 50 sq.m.	2.00	1.50	1.00	
d.) Above 50 sq.m. up to 100 sq.m.	4.00	3.00	2.00	
e.) Above 100 sq.m. up to 150 sq.m.	5.00	4.00	2.00	
f.) Above 150 sq.m.	6.00	5.00	3.50	

\* Regardless of floor area of original construction.

NOTE: For CATEGORY I buildings the area and the rate corresponding to the proper area bracket are multiplied directly.

Examples: A single detached dwelling within Metro Manila with a floor area of 75 sq.m.

Sample Computation:

Location is Metro Manila, therefore use 1<sup>st</sup> column of fees.

Floor area = 75 sq.m.

Therefore area bracket is (d),

Fee = P 2.00 / sq.m.

Building Permit Fee:

$$75 \times 2.00 = P 150.00$$

8.3 Construction / addition / renovation / alteration of buildings under CATEGORY II shall be assessed according to the following areas:

A R E A	Metro Manila	1 <sup>st</sup> Class	2 <sup>ND</sup> Class	All Others
	Cities	Cities and Municipalities		

In sq.m.	Fee / Sq.m.	Fee / sq.m.	Municipalities Fee / sq.m.	Fee / sq.m.
a.) Up to 5,000	P 19.00	P 12.00	P 9.60	P 7.20
b.) Above 5,000 up to 6,000	18.00	11.00	8.80	6.60
c.) Above 6,000 up to 7,000	17.00	10.50	8.40	6.30
d.) Above 7,000 up to 8,000	16.00	10.00	8.00	6.00
e.) Above 8,000 up to 9,000	15.00	9.50	7.60	5.70
f.) Above 9,000 up to 10,000	14.00	9.20	7.40	5.50
g.) Above 10,000 up to 15,000	13.00	8.00	6.40	4.80
h.) Above 15,000 up to 20,000	12.00	7.00	5.60	4.20
i.) Above 20,000 up to 30,000	11.00	6.00	4.80	3.60
j.) Above 30,000	9.00	5.00	4.00	3.00

NOTE: Computation of the building permit fee for CATEGORY II buildings is cumulative. The total area is split up into sub-areas corresponding to the area bracket indicated in the table above. Each sub-area and the corresponding to its area bracket are multiplied together. The building permit fee is the sum of the individual products as shown in the following example.

Example: An industrial having a floor area of 32,000 sq.m. to be constructed in a first class city outside Metro Manila. The 2<sup>nd</sup> column of fees is to be used.

Computation for building permit fee:

First 5,000 sq.m., @ 6.00	P 30,000.00
Next 1,000 sq.m., @ 5.50	5,500.00
Next 1,000 sq.m., @ 5.25	5,250.00
Next 1,000 sq.m., @ 5.00	5,000.00
Next 1,000 sq.m., @ 4.75	4,750.00
Next 1,000 sq.m., @ 4.60	4,600.00
Next 5,000 sq.m., @ 4.00	20,000.00
Next 5,000 sq.m., @ 3.50	17,500.00
Next 10,000 sq.m., @ 3.00	30,000.00
Last 2,000 sq.m., @ 2.50	<u>5,000.00</u>
Total Building Permit Fee	P 127,600.00

8.4 Construction / addition / renovation / alteration of buildings under CATEGORY III shall assessed according to the following rates:

	<b>Metro-Manila And 1<sup>st</sup> Class Cities</b>	<b>2<sup>nd</sup> Class Cities and 1<sup>st</sup> Class Municipalities</b>	<b>All others</b>	
<b>A R E A</b>	<b>Fee / sq.m.</b>	<b>Fee / sq.m.</b>	<b>Fee / sq.m.</b>	
a.) Up to 5,000		P10.00	P 8.00	P 6.00
b.) Above 5,000sq.m. up to 6,000 sq.m.	9.00	7.50	5.50	
c.) Above 6,000 sq.m. up to 7,000 sq.m.	8.50	7.00	5.00	
d.) Above 7,000 sq.m. up to 8,000 sq.m.	8.00	6.50	4.75	
e.) Above 8,000 sq.m. up to 9,000 sq.m.	7.50	6.00	4.50	
f.) Above 9,000 sq.m. up to 10,000 sq.m.	7.00	5.50	4.00	
g.) Above 10,000 sq.m. up to 15,000 sq.m.	6.00	5.00	3.75	
h.) Above 15,000 sq.m. up to 20,000 sq.m.	5.50	4.50	3.50	
i.) Above 20,000 sq.m. up to 30,000 sq.m.	5.00	4.00	3.00	
j.) Above 30,000 sq.m.	4.00	3.00	2.50	

NOTE: Computation of the building permit fee for CATEGORY III buildings follows the example of CATEGORY II, above, section 8.3.

- 8.5 Construction / addition / renovation / alteration of buildings / structures under CATEGORY IV for agricultural purposes (includes greenhouses, granaries, barns, poultry houses, piggeries, hatcheries, stables, cowsheds and other structures for the storage of agricultural products and the like) shall be assessed according to the following rates:

	<b>Metro-Manila and 1<sup>st</sup> Class Cities</b>	<b>2<sup>ND</sup> Class Cities and 1<sup>st</sup> Class Municipalities</b>	<b>All Others</b>
<b>A R E A</b>	<b>Fee / sq.m.</b>	<b>Fee / sq.m.</b>	<b>Fee / sq.m.</b>
a.) Up to 20 sq.m.	Exempted	Exempted	Exempted
b.) Above 20 sq.m. up to 500 sq.m.	P 2.00	P 1.00	P .80
c.) Above 500 sq.m. up to 1,000 sq.m.	1.50	.80	.60

d.) Above 1,000 sq.m. up to 5,000 sq.m.	1.20	.70	.50
e.) Above 5,000 sq.m. up to 10,000 sq.m.	1.00	.50	.30
f.) Above 10,000 sq.m.	.50	.20	.10

NOTE: Computation of the building permit fee for CATEGORY IV buildings follows the example of CATEGORY II, above, Section 8.3.

8.6 Construction / addition / renovation / alteration of buildings / structures under CATEGORY V shall be assessed in accordance with the following:

- a.) Buildings belonging to division 1 of group J Occupancies, such as private garages and carports (excluding sheds and agricultural buildings grouped under CATEGORY IV ) shall be charged 50% of the rate of the principal building of which they are accessories. See Section 8.2 to 8.4 of this rule.
- b.) All parts of buildings which are open on two more sides, such as balconies, terraces, lanais, and the like, shall be charged 50% of the rate of the principal building of which they are a part. See section 8.2 to 8.4.
- c.) Aviaries, aquariums, zoo structures and the like shall be charged in accordance with the rates for agricultural structures provided under Section 8.5 above.
- d.) Fees for other ancillary structure included under division 2 of group J occupancies are provided for elsewhere in this rule, under proper headings.

8.7 Footings or foundation of buildings / structures permitted under Section 1002 of the Code:

8.8 Buildings with a height of more than eight (8.00) meters shall be charged an additional fee of twenty centavos (.20) per cubic meter above (8.00) meters. The height shall be measured from the ground level up to the bottom of the roof slab or the top line of girt, whichever applies.

8.9 Alteration / renovation / improvement on vertical dimensions of buildings / structures, such as facades, exterior and interior walls, shall be assessed in accordance with the following rates:

<b>Concrete, Bricks, or C.H.B. and the like</b>	<b>Others</b>
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- 
- a.) Metro Manila and first Class Cities, per

	sq.m. of vertical area .....	P 4.00	P 3.00
b.)	All other cities and municipalities, per		
	sq.m. of vertical area .....	2.00	1.50

8.10 Alteration / renovation / improvement on horizontal dimensions of buildings / structures, such as floorings, ceilings and roofing shall be assessed in accordance with the following percentages of the fees prescribed under Sections 8.2 to 8.5 of this rule, whichever CATEGORY applies.

- a.) Concrete, bricks or tiles and the like .....50%
- b.) Others .....30%

8.11 Repairs on Buildings / Structures:

8.11.1 Categories I, II, and III

- a.) Repairs costing up to P5,000.00.....Exempted
- b.) Repairs costing more than P5,000 shall be charged 1% of the estimated cost of repair.

8.11.2 Category IV:

- a.) Repairs costing up to P1,000.00 .....Exempted
- b.) Repairs costing more than P1,000 shall be charged 1% of the estimated cost of repair.

8.11.3 Category V:

- a.) Repairs costing up to P2,000 .....Exempted
- c.) Repairs costing more than P2,000 shall be charged 1% of the estimated cost of repair.

8.12 Raising of Buildings / Structures:

Assessment of fees for raising of any building / structure shall be on the new usable floor area generated.

The fees to be charged shall be as prescribed under Section 8.2 to 8.5 of this Rule, whichever Categories applies.

8.13 Demotion / Moving of buildings / Structures:

- a.) Demotion fee, per sq.m. of area involved..... 2.00
- b.) Moving Fee,\* per sq.m. of area of buildings / structures to be moved..... 2.00

\* If a building / structure, for which a moving permit has been issued, is already covered by a building permit and certificate of occupancy, a new building permit shall not be required therefor at its new site.

NOTE: Before the issuance of a moving permit:

1. If the buildings / structures to be moved will pass over any highway/street/road, a clearance shall first be obtained by the owner from the proper Highways / Traffic Authority.
2. Should any utility line be affected, the utility company concerned shall be notified by the owner and clearance secured from them.
  - a. Pursuant to Section 503 of the code, any building moved within or into any fire zone shall be made to comply with all the requirements for buildings in that fire zone.

8.14 Construction of Slipways.\* (See note following Section 8.17)  
Per lineal meter or fraction thereof slipway.....150.00

NOTE: This fee includes the cradle. However the winch motor shall be charged separately.

8.15 Construction of Dry Docks;\* (See Note following Section 8.17)  
Per cubic meter or fraction thereof .....20.00

NOTE: The pumps and motors shall be charged separately.

8.16 Construction of Wharves, Docks and Piers.\* (See note following Section 8.17)

- a.) Wood per sq.m. or fraction thereof.....2.00
- b.) Reinforced concrete, per sq.m. or fraction thereof.....4.00

8.17 Construction of Piers Sheds/Warehouses/Camarines:\*

See schedule of Fees Under Section 8.3 of this Rule. (Category II buildings.)

\* Before the issuance of the building permit, clearance shall first be obtained by the owner from the proper authority, such as the Philippine Ports Authority, Philippine Coast Guard, Bureau of Public Works, etc.

## 9. **ANCILLARY STRUCTURES:**

9.1 Bank and Records Vaults:  
per cu.m. or fraction there.....30.00

9.2 Swimming Pools:

- a.) Residential, per cu.m. or fraction thereof.....5.00
- b.) Commercial, per cu.m. fraction thereof.....15.00
- c.) Social/Institutional, per cu.m. or fraction thereof.....10.00

NOTE:Swimming pools improvised from local indigenous materials such as rocks, stones, and or small boulders and with plain cement flooring shall be charged 50% of the above rates.

Ancillary structures to swimming pools, such as shower rooms, locker rooms and the like shall be charged 50% of the rates corresponding to the category of swimming pool, as provided for under Sections 8.2 to 8.4 of this Rule.

9.3 Costruction of firewalls separate from the building:

per sq.m. or fraction thereof.....2.00  
 Provided, that the minimum fee shall be .....40.00

9.4 Construction/erection of towers:

Including Radio and TV towers, water tank supporting structures and like

a.) Residential	.....Exempted	
b.) <u>Commercial/Industrial</u>	<u>Self-Supporting</u>	<u>Trillon (Guyed)</u>
1. Up to 10 meters in height	2,000.00	200.00
2. Every meter or fraction thereof in excess of 10m.	100.00	10.00
c.) <u>Institutional</u>		
1. Up to 10 meter in height	1,500.00	100.00
2. Every meter or fraction Thereof in excess of 10m.	100.00	10.00

NOTE:Towers with platforms or floors shall be charged an additional fee in accordance with Sections 8.3 to 8.4 of this Rule.

9.5 Commercial/Industrial Storage Silos:

a.) Up to 10 meters in height .....2,000.00  
 b.) Every meter or fraction thereof in excess of 10m..... 100.00

NOTE:Silos with platforms or floors shall be charged an additional fee in accordance with Section 8.3 and 8.4 of this rule.

9.6 Construction of smokestacks and chimneys for commercial / Industrial Use:

9.6.1 Smokestacks:

a.) Up to 10 meters in height, measured from the base...200.00  
 b.) Every meter or fraction thereof in excess Of 10 m..... 10.00

9.6.2 Chimneys:

a.) Up to 10 meters in height, measured from the base.....40.00

	b.)	Every meter or fraction thereof in excess of 10 m.....	1.00
9.7		Construction of commercial / industrial fixed ovens: Per sq.m. or fraction thereof interior floor areas.....	40.00
9.8		Construction of Industrial Kiln / Furnace:*	
		Per cu.m. or fraction thereof volume.....	10.00
	*	Furnaces connected with boilers are exempt from this fee. The fee for the boiler includes rhe fee for the furnace.	
9.9		Construction of reinforced concrete or steel tanks for category I buildings:	
	a.)	Up to 2 cu.m. ....	Exempted
	b.)	Every cu.m. or fraction thereof in excess of 2 cu. m.....	10.00
9.10		Construction of reinforced Concrete Tanks for Commercial / Industrial use:	
	a.)	Up to 10 cu.m.....	400.00
	b.)	Every cu.m. or fraction thereof in excess of 10 cu. m. ....	20.00
9.11		Construction of waste treatment Tanks: (Including Sedimentation and Chemical Treatment Tanks) Per cu.m. of volume .....	2.00
9.12		Construction of Steel Tanks for Commercial / Industrial Use:	
	9.12.1	Above Ground:	
	a.)	Up to 10 cu.m.....	400.00
	b.)	Ecery cu.m. or fraction thereof in excess of 10 cu.m. Up to 100 cu.m. ....	20.00
	c.)	Every cu.m. or fraction thereof in excess of 100 cu.m. Up to 1,000 cu.m.....	16.00
	d.)	Every cu.m. or fraction thereof in excess of 1000 cu.m. Up to 5,000 cu.m. ....	12.00
	e.)	Every cu.m. or fraction thereof in excess of 5,000 cu.m. Up to 10,000 cu.m. ....	8.00
	f.)	Every cu. m. or fraction thereof in excess of 10,000 cu.m. Up to 20,000 cu.m.....	6.00
	g.)	Every cu.m. or fraction thereof in excess of 20,000 cu.m.....	4.00
	9.12.2	Underground:	
	a.)	Up to 20 cu.m.....	600.00
	b.)	Every cu.m. or fraction thereof in excess of 20 cu.m.....	20.00
9.13		Pull-outs and reinstallation of Commercial / Industrial Steel Tanks:	

- 9.13.1 Underground:  
Per cu.m. or fraction thereof of excavation ..... 2.00
- 9.13.2 Saddle or trestle mounted horizontal tanks:  
Per cu.m. or fraction thereof of volume of tanks.....2.00
- 9.13.3 Reinstallation of vertical storage tanks shall be considered as new construction.  
Corresponding fees shall be charged in accordance with Section 9.12.1 above.
- 9.14 Booths, Kiosks, Platforms, Stages and the like:
  - 9.14.1 Construction of permanent type booths, kiosks, platforms, stages and the like  
per sq.m. or fraction thereof of floor area ..... 8.00
  - 9.14.4 Construction of temporary type of booths, kiosks, platforms, stages, field  
offices, laborer's quarter and the like:  
Per sq.m. or fractional thereof of floor area.....4.00
  - 9.14.3 Inspection of knock down type temporary booths, platforms, stages and the like  
per unit .....20.00

**10. Construction of Tombs and Canopies, Mausoleums and Niches in Cemeteries  
And Memorial Parks:**

	Metro-Manila And 1 <sup>st</sup> Class Cities	2 <sup>nd</sup> Class Cities and 1 <sup>st</sup> Class Municipalities	All Others	
10.1 Plain tombs, cenotaphs or Monuments without backdrop Wall, canopy or roofing	Exempt	Exempt	Exempt	
10.2 Canopied tombs, wether partially Or totally roofed over, per sq.m. Of covered area	4.00	3.00	2.00	
10.3 Semi-enclosed mausoleums, Per sq.m. of built-up area	4.00	4.00	3.00	
10.4 Totally enclosed mausoleums, Per sq.m. of floor area	10.00	8.00	2.00	
10.5 Multi-level interment niches, Per sq.m. of floor area, per level	4.00	3.00	2.00	

**11. Sanitary / Plumbing Permit Fees:**

11.1 Installation Fees:

- a.) One unit, composed of one water closet, two floor drains, one lavatory, two faucets and one shower head ..... 20.00
- b.) Every fixture in excess of one unit:
  - 1. Each water closet ..... 6.00
  - 2. Each floor drain ..... 2.00
  - 3. Each sink ..... 2.00
  - 4. Each lavatory ..... 6.00
  - 5. Each faucet ..... 1.50
  - 6. Each shower head ..... 1.50
  - 7. Each slop sink ..... 6.00
  - 8. Each Urinal ..... 3.00
  - 9. Each bath tub ..... 6.00
  - 10. Each grease trap ..... 6.00
  - 11. Each garage trap ..... 6.00
  - 12. Each bidette ..... 3.00
  - 13. Each dental cuspidor ..... 3.00
  - 14. Each gas-fired water heater..... 3.00
  - 15. Each drinking fountain ..... 1.50
  - 16. Each bar or soda fountain sink..... 3.00
  - 17. Each laundry sink ..... 3.00
  - 18. Each laboratory sink ..... 3.00
  - 19. Each fixed-type sterilizer..... 1.50
  - 20. Each water meter ..... 1.50

11.2 Construction of specific vault:

- a.) Category I (Residential) ..... Exempted
- b.) All other categories:
  - 1. Up to 5 cu.m. of digestion chamber..... 20.00
  - 2. Every cu.m. or fraction thereof in excess of 5 cu.m..... 6.00

12. **ELECTRICAL PERMIT FEES:**

12.1 Lighting and Power System:

- a.) Each switch, lighting and or convenience outlet..... .80
- b.) Each remote control master switch .....20.00
- c.) Each special purpose outlet of 20 amperes capacity or more.....  
2.00
- d.) Each time switch ..... 2.00

12.2 Appliances for commercial / industrial use:

- a.) Each range or heater:
  - 1. Up to 1 kw..... 2.00

3.	Every kw or fraction thereof in excess of one kw.....	1.00
b.)	Each refrigerator or freezer .....	4.00
c.)	Each washing machine or dryer .....	4.00
d.)	Each commercially used hair curling apprratus or hair dryer .....	4.00
e.)	Each fixed-type electric fan .....	2.00
g.)	Each electric typewriter, cash register or adding machine.....	2.00
12.3	Electrical equipment or apparatus for commercial / industrial use:	
a.)	Each electric bell, annunciator system.....	4.00
b.)	Each fire alarm unit .....	2.00
c.)	Each arc (light) lamp .....	10.00
d.)	Each flasher, beacon light.....	4.00
e.)	Each X-Ray Equipment .....	20.00
f.)	Each battery charging rectifier.....	10.00
g.)	Each electric welder:	
	1. Up to 1 KVA / KW .....	4.00
	2. Every KVA / KW or fraction thereof in excess of 1 KVA / KW .....	2.00
h.)	Each Neon sign transformer .....	2.00
i.)	Each Neon sign unit .....	2.00
j.)	Each telephone switchboard: (PBX, PABX, TELEX machine, etc.).....	10.00
k.)	Each trunkline .....	4.00
l.)	Each telephone apparatus.....	2.00
m.)	Each intercom master .....	2.00
n.)	Each slave .....	1.00
12.4	Motion Picture Projectors fo commercial use:	
a.)	16 mm., per unit .....	60.00
b.)	35 mm., per unit .....	80.00
b.)	70 mm. And above, per unit.....	140.00
12.5	TV Cameras for commercial / indutrial use:	
	Per unit .....	40.00
12.6	Motors and Controlling Apparatus:	
	Per unit :	
a.)	Up to ¼ HP .....	4.00
b.)	Above ¼ HP up to 1 HP .....	6.00
c.)	Above 1 HP up to 5 HP .....	8.00
d.)	Above 5 HP up to 10 HP.....	12.00

- e.) Above 10 HP up to 20 HP..... 20.00
- f.) Every HP in excess of 20 HP..... 1.00

12.7 Generators (AC or DC) :  
Per unit:

- a.) Up to 1 KW ..... 4.00
- b.) Above 1 KW up to 5 KW ..... 8.00
- c.) Above 5 KW up to 10 KW..... 10.00
- d.) Above 10 KW up to 20 KW..... 20.00
- e.) Every KW or fraction thereof in excess of 20 KW..... 1.00

12.8 Transformer and Sub-station Equipment:

- a.) Each transformer up to 1 KVA ..... 2.00
- b.) Every KVA or fraction thereof in excess of 1 KVA up to 2,000 KVA, (based on nameplate rating)..... 1.00
- c.) Each transformer above 2,000 KVA ..... 2,000.00
- d.) Each safety switch or circuit breaker up to 50 amperes and not exceeding 600 volts..... 2.00
- e.) Each safety switch, air circuit breaker, Oil circuit breaker or vacuum circuit breaker, other than motor controlling apparatus, above 50 amperes up to 100 amperes, and not exceeding 600 volts ..... 4.00
- f.) Every 50 amperes or fraction thereof in excess of 100 amperes. 1.00
- h.) Every 10,000 amperes or fraction thereof of interrupting capacity Of every air circuit breaker or vacuum circuit breaker operating Above 600 volts. .... 4.00

NOTE: Machinery, equipment and installation of utility companies used in the generation, transmission and distribution of power shall not be subject to Permit and Inspection fees.

- 12.9 Each temporary lighting or convenience outlet for celebrations, ferias or construction purposes ..... 0.80

- 12.10 Other electrical apparatus or appliances not otherwise provided in this section Every KW or fraction thereof ..... 4.00

12.11 Temporary Current Connection:

- a.) Temporary Current Connection Permit shall be issued for testing purposes only in commercial and / or industrial establishment:  
Regular fees shall be charged and collected in accordance with the fees prescribed in this Sections.

- b.) If no final approval is issued within 60 days, a new wiring permit shall be secured and all corresponding permit fees shall be paid.

12.12 Pole / Attachment Location Plan Permit:

- a.) Approved Pole Location Plan Permit, per pole:
  - 1. Metro Manila ..... 20.00
  - 3. All other cities and municipalities..... 10.00
  
- b.) Approved Attachment Location Plan Permit, per attachment:
  - 1. Metro Manila ..... 20.00
  - 2. All other cities and municipalities..... 10.00

12.13 Miscellaneous Fees:

- 12.13.1 Each union separation, alteration, reconnection or relocation of electric meter:
  - a.) Residential ..... 10.00
  - b.) Commercial / Industrial ..... 40.00
  - c.) Institutional ..... 20.00
- 12.13.2 Issuance of Wiring Permit :
  - a.) Residential ..... 8.00
  - b.) Commercial / Industrial..... 30.00
  - c.) Institutional ..... 7.00

**13. Mechanical Permit Fees:**

13.1 Refrigeration, Airconditioning and Mechanical Ventilation:

- a.) Refrigeration (cold storage), per ton or fraction thereof..... 40.00  
NOTE: Household refrigerators, freezers, fans, etc. used in single detached, duplex  
Or multiple family dwellings are exempted from permit fees.
- b.) Ice Plants, per ton or fraction thereof..... 60.00
- c.) Package and Centralized Air Conditioning Systems:
  - 1. Up to 100 tons, per ton ..... 80.00
  - 2. Every ton or fraction thereof above 100 tons..... 40.00
- d.) Window type air conditioners, per unit..... 60.00

NOTE: Window type air conditioners used in single detached, duplex or multiple family dwellings are exempted from permit fees.

- e.) Mechanical Ventilation, per HP or fraction thereof of blower or fan, or metric equivalent..... 20.00

NOTE: In a series of AC / REF systems located in one establishment, the total installed tons of refrigeration shall be used as the basis of computation for purposes of installation/inspection fees, and shall not be considered individually.  
For evaluation purposes:

1. For Ice making

- 3.5 HP per ton, for compressor up to 50 tons capacity.
- 3.25 HP per ton, for compressors above 50 tons up to 200 tons capacity.
- 3.10 HP per ton, for compressors above 200 tons capacity.

2. For Air Conditioning

- 1.25 HP per ton, for compressors of 1.2 tons up to 5 tons capacity.
- 1.10 HP per ton, for compressors above 5 tons up to 50 tons capacity.
- 1.0 HP per ton, for compressors above 50 tons capacity.

3. For Commercial / Industrial / Refrigeration without Ice making:

- 1.5 HP per ton, for compressors of 1 ton up to 5 tons capacity.
- 1.4 HP per ton, for compressors above 5 tons up to 50 tons capacity.
- 1.3 HP per ton, for compressors above 50 tons capacity.

13.2 Escalators and Moving Walks:

- a.) Up to 50 lineal meters, per lineal meters or fraction thereof..... 20.00
- b.) Every lineal meter or fraction thereof in excess of 50 lineal meters..10.00

13.3 Elevators, per unit:

- a.) Up to 1,000 kg. Capacity..... 4,000.00
- b.) Above 1,000 Kg. Capacity..... 5,000.00
- c.) Freight Elevators ..... 5,000.00
- d.) Motor driven dumbwaiters..... 400.00
- e.) Construction elevators for materials..... 1,000.00
- f.) Car Elevators ..... 5,000.00

13.4 Boilers, per unit:

- a.) Up to 10 HP ..... 400.00
- b.) Above 10 HP up to 30 HP ..... 600.00
- c.) Above 30 HP up to 50 HP..... 800.00
- d.) Above 50 HP up to 70 HP..... 1,000.00
- e.) Above 70 HP up to 90 HP..... 1,200.00
- f.) Above 90 HP up to 100 HP..... 1,400.00
- g.) Every HP above 100 HP ..... 4.00

NOTE: Boiler rating shall be computed on the basis of one (1) sq.m. of heating surface for one (1) boiler HP.

13.5	Pressurized Water heaters used in single detached, duplex or multiple family dwellings are exempted from permit fees.		
13.6	Water, sump and sewage pumps for buildings/structures used for commercial/industrial purposes, per unit :		
	Per HP or fraction thereof.....		40.00
13.7	Automatic fire extinguishers, per sprinkle head.....		2.00
13.8	Stationary Standby Generating Sets, per unit:		
	a.) Up to 10 HP .....	300.00	
	b.) Above 10 HP up to 30 HP.....	400.00	c.) Above
30 HP	up to 50 HP.....	50 0.00	
	d.) Above 50 to 70 HP .....	600.00	
	e.) Above 70 HP up to 90 HP.....	700.00	
	f.) Above 90 HP up to 100 HP.....	800.00	
	g.) Every HP above 100 HP.....	2.00	
13.9	Compressed Air, Vacuum, Institutional and/or Industrial Gases, per outlet:.....		10.00
13.10	Other Internal Combustion Engines, Including cranes, forklifts, loaders, pumps, mixers, compressors and the like, not registered with the LTC:		
	a.) Up to 10 HP.....	200.00	
	b.) Above 10 HP up to 30 HP.....	260.00	
	c.) Above 30 HP up to 50 HP.....	320.00	
	d.) Above 50 HP up to 70 HP.....	380.00	
	e.) Above 70 HP up to 90 HP.....	440.00	
	f.) Every HP or fraction thereof above 90 HP.....	2.00	
13.11	Pressure Vessels:		
	Per cu.m. or fraction thereof.....		40.00
13.12	Other Machinery / Equipment for Commercial / Industrial use not elsewhere specified, per HP or fraction thereof.....		40.00
13.13	Pneumatics tubes, conveyors, Monorails for material handling, Per lineal meter.....		10.00
<b>14.</b>	<b><u>Fencing Permit Fees:</u></b>		
14.1	Fences made of indigenous materials and/or barbed wire, hog wire. Exempted		
14.2	Fences up to 1.80 meters in height, made of materials other than those mentioned in Section 14.1, per lineal meter of fraction thereof.....	2.00	
14.3	Fences in excess of 1.80 meters in height, made of materials other those Mentioned in Section 14.1., per lineal meter or fraction thereof.....		2.00

**15. CONSTRUCTION OF SIDEWALKS:**

- a.) Up to 20 sq.m..... 20.00
- b.) Every sq.m. or fraction thereof in excess of 20 sq.m..... 1.00

16. Paved areas intended for commercial / industrial / social / institutional use, such as parking areas, gasoline station premises, skating rinks, pelota courts, tennis and basketball courts and the like:  
Per sq.m. or fraction thereof of paved area..... 1.00

**17. Use of streets and sidewalks as permitted under chapter 11 of the Code and Rule IX of the implementing Rules and Refulations:**

17.1 Use of sidewalk:

- a.) Up to 20 sq.m. of sidewalks, per calendar month..... 200.00
- b.) Every sq.m. or fraction thereof in excess of 20 sq.m., per calendar month ..... 10.00

17.2 Erection of Scaffolding Occupying Public Areas:

- a.) Up to 10 lineal meters of frontage, per calendar month..... 120.00
- b.) Every lineal meter of fraction thereof of frontage in excess of 10 lineal meters, per calendar month..... 10.00

**18. Certificates of use or occupancy:**

18.1 Category I:

18.1.1 Metro Manila and 1<sup>st</sup>. class Cities:

- a.) Metro Manila and 1<sup>st</sup>. Class Cities:  
Section 209 of the Code..... Exempted
- b.) Buildings costing more than P15,000 up to P50,000.00..... 50.00
- c.) Buildings costing more than P50,000 up to P100,000.00..... 100.00
- d.) Buildings costing more than P100,000 up to P150,000.00.... 150.00
- e.) Buildings costing more than P150,000 up to P 250,000.00.... 200.00
- f.) Buildings costing more than P250,000 up to P 500,000.00.... 400.00
- g.) Buildings costing moer than P500,000 ..... 800.00

NOTE: Refer to Section 4 of this rule.

18.1.2 All other cities and municipalities:  
50% of above rates.

18.2 Category II:

18.2.1 Metro Manila and 1<sup>st</sup>. Class Cities:

- a.) Building costing up to P50,000.00..... 100.00
- b.) Building costing more than P50,000 up to P100,000..... 200.00
- c.) Buildings costing more than P100,000 up to P250,000..... 400.00
- d.) Building costing more than 250,000 up to P500,000..... 800.00
- e.) Buildings costing more than P500,000.00 ..... 1,600.00

NOTE: Refer to Section 4 of this rule.

18.2.2 All other cities and municipalities:  
50% of above rates.

18.3 Category III:

18.3.1 Metro Manila and 1<sup>st</sup>. Class Cities:

a.) Buildings costing up to P50,000.00.....	60.00
b.) Buildings costing more than P50,000 up to P150,000.00....	150.00
c.) Buildings costing more than P150,000 up to P250,000.00...	300.00
d.) Buildings costing more than P250,000 up to P500,00.00.....	600.00
d.) Buildings costing more than P500,000.00.....	1,200.00

NOTE: Refer to Section 4 of this Rule.

18.3.2 All other cities and municipalities:  
50% of above rates.

18.4 Category IV:

18.4.1 Metro Manila and 1<sup>st</sup>. Class Cities:

a.) Buildings with floor area up to 20 sq.m.....	Exempted
b.) Buildings with floor area above 20 sq.m. up to 500 sq.m. ....	20.00
c.) Buildings with floor area above 500 sq.m. up to 1,000 sq.m. ....	15.00
d.) Buildings with floor area above 1,000 sq.m. Up to 5,000 sq.m. ....	40.00
e.) Buildings with floor area above 5,000 sq.m. Up to 10,000 sq.m. ....	100.00
f.) Buildings with floor area above 10,000 sq.m.....	200.00

18.4.1 Metro Manila and 1<sup>st</sup>. Class Cities:

a.) Buildings with floor area up to 20 sq.m.....	Exempted
b.) Buildings with floor area above 20 sq.m. up to 500 sq.m. ....	20.00
c.) Buildings with floor area above 500 sq.m. to 1,000 sq.m. ....	15.00
d.) Buildings with floor area above 1,000 sq.m. up to 10,000 sq.m. ....	40.00
e.) Buildings with floor area above 5,000 sq.m. up to 10,000 sq.m. ....	100.00
f.) Buildings with floor area above 10,000 sq.m.....	200.00

18.4.2 All others cities and municipalities:  
50% of above rates.

18.5 Category V:

18.5.1 Metro Manila and 1<sup>st</sup>. class cities:

- a.) Garages, carports, balconies, terraces, lanais and the like:  
50% of the rate of the principal building, according to Category.  
(See Section 18.1 to 18.3 above)
- b.) Aviaries, aquariums, zoo structures and the like:  
Same rates as for Category IV.  
(See Section 15.4 above.)

18.5.2 All other cities and municipalities:

50% of above rates.

18.6 Ancillary Structures:

18.6.1 Bank and Records Vaults, per cu.m.

Of interior volume ..... 2.00

18.6.2 Swimming pools, per unit:

- a.) Residential ..... 2.00
- b.) Commercial / Industrial ..... 30.00
- c.) Social / Institutional ..... 20.00

d.) Improvised swimming pools made of materials listed under  
Section 9.2 of this Rule:

18.6.3 Swimming pool shower rooms / locker rooms:

Per unit:

- a.) Residential ..... 5.00
- b.) Commercial / Industrial ..... 15.00
- c.) Social / Institutional ..... 10.00

18.6.4 Towers, per unit:

	<u>Self-Supporting</u> <u>Trilon (Guvod)</u>	
a.) Residential	Exempted	Exempted
b.) Commercial / Industrial	40.00	20.00
c.) Social / Institutional	20.00	10.00

18.6.5 Commercial / Industrial Storage Silos: per unit ..... 40.00

18.6.6 Smokestacks, per unit ..... 20.00

18.6.7 Chimneys, per unit: ..... 10.00

18.6.8 Commercial / Industrial Fixed Ovens, per unit ..... 10.00

18.6.9 Industrial Kiln / Furnace, per unit ..... 20.00

18.6.10 Reinforced Concrete Tanks, per unit :

a.) Residential:

- 1. Up to 2 cu.m. .... Exempted
- 2. Above 2 cu.m. .... 10.00

b.) Commercial / Industrial ..... 40.00

c.) Social / Institutional ..... 20.00

18.6.11	Steel Tanks, per unit:	
	a.) Residential :	
	1. Up to 2 cu.m .....	Exempted
	2. Above 2 cu.m.....	10.00
	b.) Commercial / Industrial :	
	1. Above ground.....	40.00
	2. Underground .....	30.00
	c.) Social / Institutional .....	20.00
18.6.12	Booths, Kiosks, Platforms, Stages and the like .....	10.00

**19. Change in Occupancy :**

19.1	Metro Manila and 1 <sup>st</sup> . Class Cities:	
	Every sq.m. or fraction thereof of area affected .....	4.00
19.2	All other cities and municipalities:	
	50% of above rate.	

**20. Certificate of Occupancy for buildings / Structures completed prior to Effectivity Of the NBC :**

NOTE: The National Building Code (PD 1096) became effective on February 19, 1977.

20.1 Category I:

a.)	Metro Manila and 1 <sup>st</sup> . Class Cities:	
1.	Indigenous family dwellings and houses of mixed Materials having an area not exceeding 40 sq.m. for which application are filed within the 2 year period specified in Annex "A-3" of Rule II* .....	Exempted
2.	Indigenous family dwellings and houses of mixed Materials having an area not exceeding 40 sq.m. For which application are filed after the 2 year period*.....	25.00
* The 2-year grace period expires on October 23, 1980.		
3.	Buildings with areas above 40 sq.m. up to 100 sq.m. ....	50.00
4.	Buildings with area above 100 sq.m. up to 200 sq.m. ....	75.00
5.	Buildings with area above 200 sq.m. up to 300 sq.m. ....	100.00
6.	Buildings with area above 300 sq.m. up to 500 sq.m. ....	200.00
7.	Buildings with area above 500 sq.m. ....	400.00

b.) All other cities and municipalities:  
50 % of above rates.

20.2 Category II:

a.)	Metro Manila and 1 <sup>st</sup> . Class Cities:	
1.	Buildings with area up to 5,000 sq.m. ....	50.00
2.	Buildings with area above 5,000 sq.m. up to 10,000 sq.m.....	100.00
3.	Buildings with area above 10,000 sq.m. up to 20,000 sq.m.....	200.00
4.	Buildings with area above 20,000 sq.m.	

up to 30,000 sq.m.....	400.00
5. Buildings with area above 500 sq.m .....	800.00

b.) All other cities and municipalities:

20.3 Category III:

a.) Metro Manila and 1 <sup>st</sup> . Class Cities:	
1. Buildings with area up to 5,000 sq.m. ....	30.00
2. Buildings with area above 5,000 sq.m. up to 10,000 sq.m.....	75.00
3. Buildings with area above 10,000 sq.m. up to 20,000 sq.m.....	150.00
4. Buildings with area above 20,000 sq.m. up to 30,000 sq.m.....	300.00
5. Buildings with area above 30,000 sq.m. ....	600.00

b.) All other cities and Municipalities:  
50% of above rates.

**21. Annual Inspection Fees :**

21.1 Annual Building Inspection Fees shall be collected by the Building Official at the following rates:

21.1.1 Category I

- a.) Single detached dwelling units and duplexes.....Exempted
- b.) If the owner requests building inspection the fee for each of the services enumerated below is ..... 100.00

- 1. Land Use Conformity
- 2. Architectural Presentability
- 3. Structural Stability
- 4. Sanitary and health requirements
- 5. Fire resistive requirements

21.1.2 Category II and III

Commercial (excluding amusement houses and gymnasia), industrial, social and institutional buildings with assessed value of:

a.) Up to P1 million .....	100.00
b.) Above P1 million up to P5 million.....	200.00
c.) Above P5 million up to P10 million.....	400.00
d.) Above P10 million up to P50 million.....	600.00
e.) Above P50 million up to P100 million.....	800.00
f.) Above P100 million .....	1,000.00

21.1.3 Amusement Houses, Gymnasia and the like;\*

- a.) First class cinematographs or theaters ..... 1,000.00
- b.) Second class cinematographs or theaters..... 600.00
- c.) Third class cinematographs or theaters ..... 400.00
- d.) Grandstands / Bleachers\* ..... 1,000.00
- e.) Gymnasia and the like\* ..... 600.00

\* Gymnasia, grandstands, bleachers, concert halls, little theaters and the like, that are integral parts of school, college or university complex shall be charged in accordance with Section 21.1.2 above.

21.2 Sanitary / Plumbing Inspection Fees:

- a.) Every inspection trip during construction ..... 4.00
- b.) Annual inspection of sanitary / plumbing system..... 15.00

21.3 Electrical Inspection Fees:

- a.) Every inspection trip during construction ..... 4.00
- c.) Annual Inspection Fees are the same as corresponding Installation Fees prescribed under Section 12 of this Rule.

NOTE: CATEGORY I buildings are exempt from annual inspection.

21.4 Annual Mechanical Inspection Fees:

Note: See Note under Section 13.1 of this Rule.

21.4.1 Refrigeration and Ice Plant:

per ton:

- a.) Up to 100 tons capacity ..... 20.00
- b.) Above 100 tons up to 150 tons ..... 16.00
- c.) Above 150 tons up to 300 tons ..... 2.00
- d.) Above 300 tons up to 500 tons ..... 8.00
- e.) Every tons or fraction thereof above 500 tons ..... 4.00

NOTE: Household refrigerators, freezers, fans, etc. used in single detached duplex or multiple family dwellings are exempted from annual inspection.

21.4.2 Air Conditioning Systems:

- a.) Window type air conditioners, per unit ..... 30.00

NOTE: Window type air conditioners used in single detached, duplex or multiple family dwellings are exempted from annual inspection.

- b.) Package or Centralized air conditioning systems;

- 1. First 100 tons, per ..... 20.00
- 2. Above 100 tons up to 150 tons, per ton..... 16.00
- 3. Above 150 tons up to 300 tons, per ton..... 12.00
- 4. Above 300 tons up to 500 tons, per ton..... 8.00
- 5. Every ton or fraction thereof above 500 tons..... 6.00

21.4.3 Mechanical Ventilation: per unit :

a.) Up to 1 HP .....	10.00
b.) Above 1 HP up to 5 HP.....	20.00
c.) Above 5 HP up to 10 HP.....	40.00
d.) Above 10 HP up to 20 HP.....	80.00
e.) Above 20 HP .....	120.00

21.4.4 Escalators and Moving Walks, per unit ..... 100.00

21.4.4 Elevators: per unit:

a.) Passenger Elevators:	
1. First 5 landings .....	400.00
2. Each landing above the 5 <sup>th</sup> . Landing.....	20.00
b.) Freight elevators .....	30.00
c.) Motor Driven Dumbwaiter.....	40.00
d.) Construction elevators for material.....	300.00
e.) Car elevators .....	40.00

NOTE: Additional floor stops / landing shall be inspected and charged in accordance with the above rates.

21.4.5 Boilers:

a.) Up to 10 HP .....	300.00
b.) Above 10 HP up to 30 HP.....	400.00
c.) Above 30 HP up to 50 HP.....	500.00
d.) Above 50 HP up to 70 HP.....	600.00
e.) Above 70 HP up to 90 HP.....	700.00
f.) Above 90 HP up to 100 HP.....	800.00
g.) Every HP in excess of 100 HP.....	4.00

NOTE: Boiler rating shall be computed on the basis of one (1) sq.m. of heating surface for one (1) boiler HP.

21.4.7 Pressurized water heaters, per unit ..... 100.00

NOTE: Pressurized water heaters used in single detached or duplex family Dwellings are exempt from inspection.

21.4.8 Automatic fire extinguishers, per sprinkler head ..... 1.00

21.4.9 Water, Sump and Sewage pumps for buildings / structures for commercial / industrial purposes per unit:

a.) Up to 1 HP .....	10.00
b.) Above 1 HP up to 3 HP .....	30.00
c.) Above 3 HP up to 5 HP .....	60.00
d.) Above 5 HP up to 10 HP.....	80.00
e.) Above 10 HP up to 20 HP.....	100.00
f.) Above 20 HP up to 30 HP.....	120.00
g.) Above 30 HP up to 40 HP.....	140.00
h.) Above 40 HP up to 50 HP.....	160.00

i.)	Above 50 HP up to 60 HP.....	180.00
j.)	Above 60 HP up to 70 HP.....	200.00
k.)	Above 70 HP to 80 HP.....	220.00
l.)	Above 80 HP up to 90 HP.....	240.00
m.)	Every HP or fraction thereof above 90 HP.....	2.00

NOTE: Water, sump and sewage pumps used in single detached or duplex Family dwellings are exempt from inspection.

21.4.10 Standby generating sets: per unit:

a.)	Up to 10 HP .....	40.00
b.)	Above 10 HP up to 30 HP .....	80.00
c.)	Above 30 HP up to 50 HP .....	120.00
d.)	Above 50 HP up to 70 HP .....	160.00
e.)	Above 70 HP up to 90 HP .....	200.00
f.)	Above 90 HP up to 100 HP .....	240.00
g.)	Every HP or fraction thereof above 100 HP.....	2.00

21.4.11 Other Internal combustion Engines, including cranes, Forklifts, Loaders, Pumps, Mixers, Compressors and the like, per unit:

a.)	Up to 10 HP.....	80.00
b.)	Above 10 HP up to 30 HP .....	140.00
c.)	Above 30 HP up to 50 HP .....	200.00
d.)	Above 50 HP up to 70 HP .....	260.00
e.)	Above 70 HP up to 90 HP .....	320.00
f.)	Above 90 HP up to 100 HP .....	380.00
g.)	Every HP or fraction thereof above 100 HP.....	2.00

21.4.12 Other machinery and / or equipment for commercial / industrial use not elsewhere specified, per unit:

a.)	Up to ½ HP.....	6.00
b.)	Above ½ HP up to 1 HP.....	20.00
c.)	Above 1 HP up to 3 HP .....	40.00
d.)	Above 3 HP up to 5 HP.....	60.00
e.)	Above 5 HP up to 10 HP.....	80.00
f.)	Above 10 HP up to 20 HP.....	100.00
g.)	Above 20 HP up to 30 HP.....	120.00
h.)	Above 30 HP up to 40 HP.....	160.00
i.)	Above 40 HP up to 50 HP.....	200.00
j.)	Above 50 HP up to 60 HP.....	240.00
k.)	Above 60 HP up to 70 HP.....	280.00
l.)	Above 70 HP up to 80 HP.....	320.00
m.)	Above 80 HP up to 90 HP.....	360.00
n.)	Above 90 HP up to 100 HP.....	400.00
o.)	Every HP or fraction thereof above 100 HP.....	2.00

21.4.13	Pressure Vessels, Per cubic meter or fraction thereof .....	30.00
21.4.14	Pneumatics tubes, Conveyors, Monorails for material handling, Per lineal meter or fraction thereof .....	2.00
21.4.15	Testing / Calibration of pressure gauge, per unit.....	20.00
21.4.16	Gas Meters:	
	Each gas meter tested, proved and sealed:	
a.)	Up to 10 lights .....	12.00
b.)	Above 10 lights up to 50 lights .....	16.00
c.)	Above 50 lights up to 100 lights .....	24.00
d.)	Above 100 lights .....	12.00
21.4.17	Every inspection of mechanical rides used in amusement centers Of fairs, such as ferris wheels, merry-go-rounds; roller coasters And like, per unit .....	20.00

**22. Sign Permit Fees :**

22.1	Business Signs:	
a.)	Neon .....	30.00
b.)	Illuminated .....	20.00
c.)	Others .....	12.00
d.)	Painted-on .....	8.00
	NOTE: Signs not exceeding 0.20 sq.m. of display surface, and/or temporary signs for charitable, religious and civic purposes are not to obtain a permit. Fees for electrical parts of signs are found in Section 12.1 and 12.3 of this Rule.	
22.2	Annual Renewal Fees:	
	Per sq.m. of display surface or fraction thereof;	
a.)	Neon Signs .....	30.00
	Provided that minimum fee shall be .....	120.00
b.)	Illuminated signs, .....	15.00
	Provided that minimum fee shall be .....	60.00
c.)	Painted –on signs .....	20.00
	Provided that minimum fee shall be .....	20.00

**3. Certifications :**

23.1	Certified true copy of building permit .....	4.00
23.2	Certified true copy of certification of use/occupancy.....	4.00
23.3	Issuance of certificate of damage .....	4.00
23.4	Certified true copy of Certificate of Damage .....	4.00
23.5	Certified true copy of Electrical Certificate .....	4.00
23.6	Issuance of certificate of gas meter installation .....	12.00
23.1	Certified true copy of Certificate of Operation.....	4.00

**4. Payment of Fees :**

All fees mentioned in this rule shall be paid to the Cashier of the District / City / Municipal Building Official or to the Municipal Treasurer before the issuance of the building permit.

**25. Penalties :**

- 25.1 A surcharge of 100% shall be imposed and collected from any person who shall construct, install, repair, alter or cause any change in the use or occupancy of any building or parts thereof or appurtenances thereto without any permit.
- 25.2 All inspection fees shall be paid within 30 days from the prescribed date, Otherwise a surcharge of 25% shall be imposed.
- 25.3 Administrative fines, penalties and / or surcharges for various violations of the code are prescribed under Sections 8 to 10 of Rule VIII.

**RULE IV - DISPOSITION OF INCOME FROM FEES AN OTHER CHARGES**

Pursuant to the provisions of Sections 207, 208, 210 and 211 of the National Building Code (PD 1096), this Rule is promulgated to define the procedure for the proper reporting and recording of collections and disbursements of the funds of the General Fund Special Account 151, of the Office of the Minister, MPW, and for the guidance and compliance of all concerned.

**1. Duties of the Building Official**

- 1.1 Every Building Official shall keep a permanent record and accurate account of all fees and other charges fixed and authorized to be collected by him under Rule III.
- 1.2 The Official Receipt shall show the breakdown of the total collections indicating the share of the local government concerned (80%) and the share of the National Government (20%).
- 1.3 If the collection will be made by a designated National Collecting Officer, and if payment of the permit fees and other charges shall be made by check each for the 20% and 80% shares be prepared to facilitate the distribution of shares.
- 1.4 Subject to existing budgetary, accounting and auditing rules and regulations, he shall remit to the Bureau of Treasury, the twenty percent (20%) of his collection. The remaining eighty percent (80%) shall be deposited with the city or municipal treasurer and shall accrue to the general fund of the city or municipality concerned and who shall acknowledge his share by issuing his official receipt accordingly.
- 1.5 Every Building Official shall keep a separate record from the Central Office of all fund allocations and Advices of CDC, received by him out of budgeted amounts released by the Ministry of the Budget.

**2. Disposition of Collections**

- 2.1 Every last working day of the week or oftener pursuant to Part II-2-a of the Department of Finance Order No. 20-73 and COA General Circular 130 dated 14 June 1973, the Building Official thru his collecting officer or cashier shall deposit the eighty percent (80%) share of collections to the city of municipal treasurer concerned.

He shall remit the twenty percent (20%) of the collections to the Bureau of the Treasury thru any authorized government depository bank branch nearest the locality of the credit of the Ministry of Public Works, Office of the Minister with Code No. B1289 and Special Account No. 151.

- 2.1 Distribution of validated remittance advices (ref. COA Circular No. 78-78).

2.2.1 For remittances of 20% collections of the building permit fees directly with the National Treasury:

Original - To be retained by the National Cash  
Division Bureau of Treasury for submission to the National Cash  
Accounting Division, Bureau of the Treasury.

Duplicate - to be retained by the National Cash Division  
for its file.

Triplicate - to be retained by the National Cash Division  
for submission to provincial Treasurer Fiscal  
Examiner assigned in Metro-Manila.

Quadruplicate - to be returned to the National Collecting  
officer for submission to the MPW Chief  
Accountant with his monthly report to  
collections.

Quintuplicate - to be retained to the National Collecting  
officer for submission to the MPW auditor  
of the National Collecting Officer concerned  
thru the Treasury Vault Auditor.

Sextuplicate - to be returned to the National Collecting  
Officer for his file.

2.2.2 For remittances of the 20% collections thru the PNB, PVB, DSP or LBP:

Original - to be retained by the bank branch for  
submission to the Bureau of Treasury (National Cash  
Accounting Division) thru the Bank Head Office (Accounting  
Department).

Duplicate - to be retained by the bank branch for its file.

Triplicate - to be retained by the bank branch for submission to the Provincial Treasury Fiscal Examiner assigned to the province where the bank is located.

Quadruplicate - to be returned to the National Collecting Officer for submission to the MPW Chief Accountant with his monthly report of collections.

Quadruplicate - to be retained by the bank branch for submission to the Field Auditor of the Officer concerned thru the bank auditor. National Collecting

Sextuplicate - to be returned to the National Collecting Officer for his file.

## 2.3 Responsibilities

### 2.3.1 National Collecting Officers

Since the distribution of copies of the validated remittance advices for the Agency/Field Auditor of the National Collecting Officers shall be undertaken by the National/Treasury/Bank branch thru its Treasury Vault Auditor/Bank Auditor all national collecting officers shall indicate on the face of the remittance advice, the name and office address of their respective agency/field auditors to facilitate matters.

### 2.3.2 Treasury Vault/Bank Auditor

Upon receipt of the validated remittance advices, the treasury vault auditor/bank auditor shall confirm and transmit said remittance advices every end of the week to the corresponding agency/field auditors of the National collecting officers concerned. In cases where there are no bank auditors assigned in a particular locality, confirmation shall be undertaken by the officer designated by the Head of the bank branch.

## 3. **Reporting Collections of Building Permit Fees and other Charges** (Ref: COA General Circular NO. 78-78).

3.1 Pending decentralization of the accounting service the reports of field offices (districts and regions) shall be prepared in five copies, distributed as follows after verification by the field/local auditor in accordance with GAO Gen. Circular No. 133 dated 1 September 1975.

Original - To the Central Office Auditor (thru

the Central Office Accountant for recording).

Duplicate (with duplicate - To the regional or field/local auditor official receipts and validated for final custody. quintuplicate remittance advices)

Triplicate (with validated - To the Central Office Accountant quadruplicate remittances (for posting to the corresponding advices) subsidiary ledgers).

Quadruplicate (with triplicate - To be retained by the field collecting official receipts and officer. validated sextuplicate

file Quintuplicate - regional/district office accounting

3.1.1 The field collecting officer shall certify all the copies of the report and submit the first three (3) copies to his field auditor within three (3) days after the end of the month for audit. The field auditor shall verify the report, cross-check the remittances indicated therein against the quintuplicate copies of remittance advices he receives/received from the bank auditor of the national collecting officer concerned indicate his certification thereon and finally submits the original and triplicate copies thereof to the MPW Auditor thru the MPW Chief Accountant within five (5) days from date of receipt from the field collecting officer.

### 3.2 Crediting of Accounts of National Collecting Officers

In the monthly report of collections, specifically at the bank thereof, is a statement of account current showing the accountability of the national collecting officer. The MPW Chief Accountant shall cross-check the validated quadruplicate remittance advices attached to the duplicate copy of the monthly report of collections against the remittances made by the National Collecting Officer with the National Treasury of any of its authorized depository banks as appearing in the statement of account current. After the cross-checking, and in the absence of any discrepancy, the MPW Chief Accountant shall credit the account of the national collecting officer even without the monthly abstract of remittances from the National Treasury in case of Central Accounting Offices.

## 4. Safeguards

4.1 Upon receipt of the monthly abstract of remittances from the National Treasury, the remittances appearing therein shall be counter checked by the MPW Chief Accountant against the credits already given the collecting officers concerned and any discrepancies discovered in the process shall be verified and adjusted immediately.

- 4.2 In case the retirement of resignation by the collecting officers, their clearances shall be held in abeyance until their remittances have been fully cleared by the National Treasury.

## **5. Centralized Accounting System**

- 5.1 A centralized accounting system shall be maintained in the Office of the Minister, MPW. The Office of the Minister shall set up and maintain a separate set of books of accounts to be used solely for transactions pertaining to the implementation of the provision of the National Building Code and its implementing rules and regulations.
- 5.2 Upon receipt of the Advice of Allotment and the corresponding Cash Disbursement Ceiling, the Office of the Minister shall in turn allocate the same together with the sub-advice of cash disbursement ceiling to the Building Officials, copy furnished the Public Works Regional Director and at the same time obligates the allotment for the amount of expenditures.
- 5.3 The procedures for deputation as deputized Disbursing Officer or Deputized Counter-signing Officer are prescribed in Treasury Memorandum Circular No. 3-78 dated 16 June 1978 and supplemented by TMC No. 1-79 dated 20 February 1979.
- 5.4 In the requisition and distribution of blank Treasury checking Account for Agencies (TCAA) Checks, of the Philippine National Bank (PNB), Philippine Veterans Bank (PVB) and/or Land Bank of the Philippines (LBP), the revised regulations contained in Treasury Memorandum Circular No. 4-78 dated 16 June 1978 shall be followed.
- 5.5 All deputized disbursing officers (building officials and/or cashiers) shall render the following reports:
- 5.5.1 Report of checks issued and cancelled together with duplicate copies of checks issued required under paragraph III-B-5, Dept. Memo Circular No. 11-73 dated 9 May 1973 of the Department of Finance for submission to Treasury Provincial Fiscal Examiner in the region (4.3 of TMC 4-78).
- 5.5.2 Report of checks issued by the deputized disbursing officers G.F. No. 108-A Circular No. 3-74, for entry in the journal of checks issued by deputized disbursing officer (JCIDDO, G.F. No. 108) by Chief Accountant, MPW. For particulars, refer to BC No. 147 & 147-A.
- 5.6 If the deputized disbursing officer shall maintain a petty cash advance out of the allocation from building permit fees, he shall after the fifteenth and end of each month prepare the report of disbursement in four copies distributed as follows; (Ref: COA GC 133):
- Original - to the field auditor for verification and certifications and submission to the MPW Auditor (thru the MPW Chief Accountant for recording).

Duplicate (with original paid pay-rolls and vouchers) - to the field local auditors (for final custody).

Triplicate - to the MPW Chief Accountant (for posting to the corresponding subsidiary ledgers).

Quadruplicate - to be retained by the field disbursing officer.

The report shall be certified by the field disbursing officer who shall submit it to the field auditor concerned within three (3) days after the fifteenth and end of the month, for audit. The field auditor concerned shall verify the report and invariably indicate his certification thereon; after which he shall submit the same to the MPW Chief Accountant within five days after receipt thereof from the he disbursing officer.

5.7 The Ministry Chief Accountant shall adjust obligations quarterly to actual liquidations as required.

5.8 Deputized disbursing officers shall keep record to control cash ceiling and allocation separate from other funds in his custody.

5.9 Deputized disbursing officers shall prepare other statements or reports that may be required from time to time by the proper authorities such as status of cash disbursement ceiling at the end of the year.

5.10 The building Official shall render a monthly report of accountability for treasury checks provided him by the Treasury Provincial Fiscal Examiner in the province (Section 3.4 of TMC No. 4-78) using form No. 16-A covering the balance of checks issued during the month and the balance at the end of the month. Copies of said report shall be distributed as follows:

Original - to the Treasury Provincial Fiscal Examiner (Cash Operations Service)

Duplicate - to the Head of the Office (Accounting Division, MPW)

Triplicate - to the Auditor, MPW

Quadruplicate - Field Auditor

Quintuplicate - Field of Disbursing Officer (Ref: Primer on TCAA)

5.11 The deputized disbursing officer authorized to requisition blank TCAA checks shall prepare and submit requisition and issue voucher Form No. 45(A), and the Invoice and Receipt of Accountable Forms, Form No. 33 (A) which shall be distributed as follows:

Original - Treasury Provincial Fiscal

- Duplicate - Cash Operations Service, BTR
- Triplicate - COA Auditor of the DDO's Agency
- Quadruplicate - Accounting Unit of DDO
- Quintuplicate - Deputized Disbursing Officer file
- Sextuplicate - Office of the Provincial/City Auditor

Concerned.

A BTR identification card (Exhibit IV) shall be accomplished in two copies by the deputized disbursing officer

- One copy - Treasury Provincial Fiscal Examiner
- One copy - Authorized DDO

## **6. Turnover of Accountability**

- 6.1 In case of change, transfer, resignation or retirement from the service of the Building Official, an inventory of all money and property accountabilities shall be taken jointly by the outgoing and incoming Building Official and a receipt passed on the basis of such inventory. Such inventory shall be certified as accurate by the said officers, witnessed by the auditor thereat, and approved by the Minister, MPW (Sec. 645, Revised Administrative Code).
- 6.2 The proceeding procedure shall also apply to a deputized disbursing officer other than the Building Official with respect to money and property accountability in his custody.
- 6.3 Application for clearance of the building official and other deputized disbursing officers shall be coursed to the Office of the Minister, MPW, to check their unpaid obligations with this Office (Dept. Memo Circular No. 2 dated 28 January 1974).

## **7. Other Provisions**

This Rule IV is promulgated to define the procedure for the proper reporting and recording of collections and disbursements of the funds of the General Fund Special Account 151, of the Office of the Minister, MPW, pursuant to PD 1096 otherwise known as the National Building Code.

Any circular/s that may subsequently be issued by the proper authorities revoking or amending provisions or certain portions of circular/s incorporated in the above rules and regulations shall automatically revoke or amend such corresponding portions that are inconsistent therewith.

The provisions or portions of circulars, as amended shall automatically prevail without need of further revisions of this Rule IV - Rules and Regulations of the National Building Code.

## **RULE V - SIGNS**

Pursuant to Chapter 20 of the National Building Code (P.D. 1096), the following rules and regulations shall govern the design, content, construction, location, installation and maintenance of outdoor billboards, advertising and display signs, streamers, posters and the like.

Definition - For purposes of this Rule, the following definitions shall apply:

**ADVERTISING SIGN** - A sign that directs attention to a business, profession, commodity, service or entertainment conducted, sold or offered at a place other than where the business, professions, etc., is located. An off-premise sign.

**ARCADE** - Any portion of the building above the first floor projecting over the sidewalk beyond the first story wall used as protection for pedestrians.

**BILLBOARD** - A panel for posting bills or posters.

**BUSINESS LINE** - The line formed by the intersection of the outer surface of the enclosing wall of the building and the surface of the ground.

**DISPLAY SIGN** - Any material, device or structure that is arranged, intended, designed, or used as an advertisement, announcement or directory that includes a sign, sign screen, billboards or advertising device of any kind.

**DISPLAY STAND** - Any movable structure, table, showcase, cabinet and the like where goods or periodicals are displayed.

**DISPLAY SURFACE** - The entire area enclosed by the extreme limits or perimeter of a sign.

**DISPLAY WINDOW** - That portion of a building abutting the sidewalk open to public view protected by grilles, screens or transparent materials for the display of goods.

**ELECTRICAL SIGN** - Any sign which has characters, letters, figures, designs, faces, backgrounds or outline illuminated by incandescent or fluorescent lamps or luminous tubes as part of the sign proper. These light sources being either external or internal.

**GROUND SIGN** - A sign resting on the ground.

**POSTER** - A fabricated flat surface upon which a message is either poster or painted.

**PROJECTING SIGN** - A sign fastened to, suspended from or supported on a building or structure the display surface of which is perpendicular from the wall surface or is at an angle therefrom.

**ROOF SIGN** - A sign installed on roofs, roof decks or eaves.

**SIGN** - Any letter, word, numeral, pictorial presentation, illustration, decoration, emblem, device, symbol or trademark, flag, banner, or pennant, or any other figure of similar character that is:

- attached to, painted on or in any manner represented on a building or structure.
- used to announce, direct attention to or advertise, and visible to the public.

**SIGN STAND** - Any movable structure on which a sign is mounted or supported.

**STRUCTURE** - That which is built or constructed, an edifice or building of any kind, or any piece of work artificially build up or composed of parts joined together in some definite manner.

**TEMPORARY SIGN** - A sign of cloth or other light and/or combustible material, with or without frame installed for a limited period of time.

**WALL SIGN** - A sign painted on, attached or fastened to the surface of the wall or any part of a building or structure the display surface or which is parallel to the wall surface.

**IMPRINT** - A plaque or sticker or lettering to be painted on either the top or the bottom of the poster or sign as a means of identifying the company to whom the structure belongs and the permit issued therefor.

## 2. General Provisions:

- 2.1 Signs shall adhere to the Code of Ethics for Advertising and Promotions and to the rules and regulations of the appropriate agency in charge of the conduct of the business.
- 2.2 Signs shall promote and uphold the public good especially in historical monuments and shrines, natural scenic areas, parks, parkways and their immediate approaches. Immediate approaches shall mean a distance not exceeding 50.00 meters from the periphery of said areas.
- 2.3 Signs shall display or convey only messages or visuals that conform to public decency and good taste.
- 2.4 Signs shall follow standards of design, construction and maintenance in the interest of public safety, convenience, good viewing and to promote proper urban design or community architecture.
- 2.5 Sign structures may be constructed only in areas where zoning regulations permit them and in accordance with the accepted standards of design; construction and maintenance.
- 2.6 Sign structures shall be constructed in accordance with the provisions of Section 2003 of the National Building Code. Plans of sign structures exceeding 3.00 meters in height from the ground shall be signed and sealed by a duly registered Architect or Civil Engineer.
- 2.7 Signs and sign structures built within highly restrictive fire zones shall be of incombustible materials. No combustible materials other than approved plastics shall be used in construction of electrical signs.

- 2.8 Signs and sign structures equipped with electrical devices shall have an electrical wiring plant conforming with the provision of the Philippine Electrical Code duly signed by a Professional Electrical Engineer; Provided, that for installations not exceeding 600 volts and 4 kilowatts, a sketch and bill of materials signed and sealed by an electrical Engineer or Master Electrician shall be sufficient.
- 2.9 Signs shall be placed in such a manner that no part of its surface will interfere in any way with the free use of a doorway, a fire escape, standpipe or other required means of exit and fire-protective devices.
- 2.10 Signs shall be erected in such a manner as not to confuse or obstruct the view or interpretation of any public sign, traffic signal or device, nor obstruct the sight, distract the attention of motorists, reflect blinding light or cause glare to oncoming traffic.
- 2.11 Signs which are written in Chinese or any foreign language shall have a corresponding translation in English or in the local dialect.
- 2.12 The bottom line of all signboards adjacent to each other shall follow a common base line as determined by the Building Official.
- 2.13 The installation of all kinds of signs shall be such that a harmonious and aesthetic relationship of all units therein is presented.

### 3. Specific Provisions:

#### 3.1 Advertising Signs

Outdoor advertising signs shall be permitted only in commercial or industrial zones as designated in the Official Zoning Map.

#### 3.2 Business Signs

- 3.2.1 Business signs shall have a maximum width of 1.20 meters and a length not exceeding the frontage of the lot.
- 3.2.2 Business signs installed, displayed or erected in the same building shall preferably be of identical size and flush against the building facade.
- 3.2.3 In highly built-up urban areas, business signs may be allowed within the immediate approaches as defined in Section 2.2

#### 3.3 Roof Signs

- 3.3.1 The design and construction of roof signs shall conform to the provisions of Sec. 2030 of the National Building Code. However, no signs shall be erected, attached to, installed or fastened on roof tops of buildings of wooden structures.
- 3.3.2 Adequate provisions for grounding metallic parts of roof signs exposed to lightning shall be provided.

### 3.4 Ground Signs

- 3.4.1 Ground signs shall not exceed 6.00 meters in height above the street crown except neon signs which shall be constructed in conformity with accepted engineering standards.
- 3.4.2 Ground signs shall be located within the property line and under no circumstances shall they occupy the street or sidewalk.
- 3.4.3 Public or government signs erected or installed within the area of the sidewalk shall be so designed and located that they do not obstruct the easy passage of pedestrians nor distract the attention of motorists.
- 3.4.4 Self-supporting outdoor signs along highways shall be located 10.00 meters away from the property lines abutting the road right-of-way.

### 3.5 Projecting Signs

The erection of projecting signs shall be subject to the following conditions:  
(see Figures 2, 3 & 4)

- 3.5.1 On non-arcaded streets or where arcades are proposed, signs shall not extend more than 1.20 meters from the wall line or building line. On arcaded streets, the signs shall not project more than 1.00 meter from the wall line over the street. For buildings abutting on streets or alleys without sidewalks or provisions therefor, the rules for arcaded streets shall apply on projecting signs.
- 3.5.2 A clearance of not less than 3.00 meters shall be provided below the lowest part of such signs projecting over sidewalks on buildings without arcades and clearance of not less than 5.00 meters shall be provided below the lowest part of such signs projecting over arcaded streets.
- 3.5.3 The erection of electrical neon signboards or other advertisements of similar nature projecting over roadways or public streets, shall be allowed, provided that:
  - 3.5.3.1 Clear distances between the signboards erected on one building is not less than 4.00 meters.
  - 3.5.3.2 Signboards on multi-storey buildings shall be erected on the same vertical line and shall not overlap each other.
  - 3.5.3.3 Tops of signboards shall not exceed over the topmost part of the parapet or the bottom line of the eave of the building.
  - 3.5.3.4 Horizontal projections of signboards shall follow Rules 3.5.1 and 3.5.2 above.

3.5.3.5 In case of two adjacent buildings, adjacent signboards shall be placed at a distance of not less than 2.00 meters from the common boundary line.

3.5.3.6 Signboards shall not obstruct any window or emergency exit, nor be closer than 1.00 meter to electric and telephone posts and wires.

3.5.3.7 Vertical clearances shall follow Rule 3.5.2 above.

### 3.6 Wall Signs

The construction of wall signs shall be subject to the following conditions:  
(see Figure 4.)

3.6.1 Display signs placed against the exterior surface of buildings shall not extend more than 300 millimeters from the wall with its lowest portion not less than 3.00 meters above the sidewalk.

3.6.2 Signs shall not extend beyond the top and/or sides of any face of the exterior perimeter walls of the building. Signs when made of combustible materials shall not exceed 4.00 square meters in area. Those made of incombustible materials may be allowed to cover the entire surface of blank walls only and shall not be allowed to cover or obstruct openings.

3.6.3 All signs painted or pasted on the exterior surface of buildings or structures may be considered either as business or advertising signs.

3.6.4 Sign stands or display stands shall not be placed on the sidewalk pavement.

3.6.5 Signs shall not be attached to, painted on, installed or displayed on posts or columns of arcades.

3.6.6 Display windows or wall signs within 3.00 meters above the sidewalk shall be flush or recessed.

### 3.7 Temporary Signs

3.7.1 All temporary signs, bills, posters and the like may be installed or posted only in areas or structures allowed by pertinent provisions of this Code.

3.7.2 Streamers strung over or across any public thoroughfare shall have the necessary permit therefor from the Building Official. The lowest point of the bottom edge of streamer shall have a minimum clearance of 4.30 meters above the pavement.

## 4. Administrative Provisions:

### 4.1 Applications

Any person desiring to display, erect, or maintain any sign shall file an application therefor with the Office of the Building Official in a standard form stating among others, the location of the premises wherein said sign is to be displayed, erected or maintained accompanied with the pertinent drawings and/or sketches. The application shall also include the location and the site plans, written consent of the owner of the premises and such other pertinent data as may be required by the Building Official.

#### 4.2 Permit for erection or installation

No sign of any kind shall be erected, installed or constructed unless a permit therefor is obtained from the Building Official

#### 4.3 Exemptions

A permit shall not be required for any sign not exceeding 0.20 square meter of display surface nor for temporary signs for charitable, religious, and civic purposes duly authorized. This exemption shall not release the owner from responsibility for its design, construction, installation, maintenance and removal.

#### 4.4 Removal/Alterations

A sign with permit which was erected before the adoption of this Rule but not conforming hereto shall be given a grace period to conform dating from the receipt of notice as follows:

- a) Neon Signs ..... 12 months
- b) All others ..... 6 months

#### 4.5 Existing Signs

4.5.1 Existing signs without permit but conforming to the provisions of this Rule shall be allowed to remain provided the owner obtains a validating permit within 30 days from receipt of notice from the Building Official.

4.5.2 Existing signs without permit and non-conforming to the provisions of this Rule shall be altered to conform to this Rule. The owner shall secure the necessary permit not later than 60 days from receipt of notice from the Building Official. In case of failure to secure permit within the grace period the sign shall be removed by the owner. For failure of the owner to remove the sign, the Building Official shall cause the removal of the sign at the expense of the owner.

#### 4.6 Maintenance

Signs shall be maintained in a safe and presentable condition. Should a sign become, in the opinion of the Building Official, unsafe or an eyesore, the permute shall, upon notice from the Building Official, immediately restore the sign to a safe and satisfactory condition.

For non-compliance with the notice, the Building Official shall restore the sign at the expense of the permittee.

#### 4.7 Identification

Signs shall bear the imprint of the permittee.

#### 5. Design:

- 5.1 General. Signs and sign structures shall be designed and constructed to resist wind and seismic forces as specified in this Rule. All bracing systems shall be designed and constructed to transfer lateral forces to the foundations. For signs on buildings, the dead and lateral loads shall be transmitted through the structural frame of the building to the ground in such manner as not to overstress any of the elements thereof.

The overturning moment produced from lateral forces shall in no case exceed two-thirds of the dead-load resisting moment. Uplift due to overturning shall be adequately resisted by proper anchorage to the ground or to the structural frame of the building. The weight of earth superimposed over footings may be used in determining the dead-load resisting moment. Such earth shall be carefully placed and thoroughly compacted.

- 5.2 Wind loads. Signs and sign structures shall be designed and constructed to resist wind forces as specified in Chapter 2 of the National Structural Code for Buildings (NSCB).
- 5.3 Seismic Loads. Signs and sign structures shall be designed and constructed to resist seismic forces as specified in Chapter 2 of the NSCB.
- 5.4 Combined Loads. Wind and seismic loads need not be combined in the design of signs or sign structure, only that loading producing the larger stresses need be used.

Vertical design loads, except roof live loads, shall be assumed to be acting simultaneously with the wind or seismic loads.

- 5.5 Allowable Stresses. The design of wood, concrete, or steel members shall conform to the requirements of Chapter 3, 4 and 5, of the NSCB. Loads, both vertical and horizontal, exerted on the soil shall not produce stresses exceeding those specified in Chapter 7 of the NSCB.

The working stresses of wire rope and its fastenings shall not exceed 25 percent of the ultimate strength of the rope or fastener.

Working stresses for wind or seismic loads combined with dead loads may be increased as specified in Chapter 2 of the NSCB.

#### 6. Construction:

- 6.1 General. The supports of all signs or sign structures shall be placed in or upon private property and shall be securely built, constructed, and erected in conformance with the requirements of this Rule.
- 6.2 Materials. Materials of construction for signs and sign structures shall be of the quality and grade as specified for buildings in this Rule.

In all signs and sign structures, the materials and details of construction shall, in the absence of specified requirements, conform with the following:

- 6.2.1 Structural steel shall be of such quality as to conform with ASTM A 36. Secondary members in contact with or directly supporting the display surface may be formed of light gauge steel, provided such members are designed in accordance with the specifications of the design of light gauge steel as specified in ASTM A 242 and, in addition, shall be galvanized. Secondary members, when formed integrally with the display surface, shall be not less than No. 24 gauge in thickness. When not formed integrally with the display surface, the minimum thickness of the secondary members shall be No. 12 gauge. The minimum thickness of hot-rolled steel members furnishing structural support for signs shall be 6.35 mm. except that if galvanized, such members shall be not less than 3.18 mm. thick. Steel pipes shall be of such quality as to conform with ASTM A 36. Steel members may be connected with one galvanized bolt provided that connection is adequate to transfer the stresses in the members.
- 6.2.2 Anchors and supports, when of wood and embedded in the soil, or within 150 mm. of the soil, shall all be of heartwood of a durable species or shall be pressure-treated with an approved preservative.

## 7. Anchorage:

- 7.1 Members supporting unbraced signs shall be so proportioned that the bearing loads imposed on the soil in either direction, horizontal or vertical, shall not exceed the safe valued. Braced ground signs shall be anchored to resist the specified wind or seismic load acting in any direction. Anchors and supports shall be designed for safe bearing loads on the soil and for an effective resistance to pull out amounting to a force 25 percent greater than the required resistance for overturning.
- 7.2 Portable ground signs supported by frames orb posts rigidly attached to the base shall be so proportioned that the weight and size of the base will be adequate to resist the wind pressure.
- 7.3 Signs attached to masonry, concrete, or steel shall be safely and securely fastened thereto by means of metal anchors, bolts, or approved expansion screws of sufficient size and anchorage to support safely the loads applied.
- 7.4 No wooden blocks or plugs or anchors with wood used in connection with screws or nails shall be considered proper anchorage, except in the case of signs attached to wood framing.

## **RULE VI - ARCADES AND SIDEWALKS**

Pursuant to Section 1004 of the National Building Code (PD 1096), arcades shall be constructed on sidewalks of streets whenever required by existing building and zoning regulations. Subject to existing laws and regulations, the local planning authority shall determine which street shall have an open sidewalk or an arcaded sidewalk, or a combination of both, and the width and height thereof, according to the following:

### **1. Width of Sidewalks and Arcades**

- 1.1 Sidewalks shall be of uniform width throughout the entire length of the street. The width of a sidewalk shall not be less than  $\frac{1}{6}$  of the road right-of-way.
  - 1.1.1 The sidewalk pavement shall have a non-slip surface and shall slope down from the building line towards the curb line of not more than one in fifty ( $\frac{1}{50}$ ) and shall level off with the curb. (See fig. 1)
  - 1.1.2 Sidewalks of 2.00 meters or more in width shall include on its outer side a planting strip of not less than 800 millimeters in width, separating the curb from the sidewalk pavement. (See fig. 9)
- 1.2 All arcades shall be of uniform width throughout the entire length of the street within the block or from one street corner to another.
  - 1.2.1 Arcades shall be cantilevered from the building line over the sidewalk, and the horizontal clearance between the curb line and the outmost face of any part of the arcade shall not be less than 500 millimeters. (See fig. 1 and 10)
  - 1.2.2 Combined open and arcaded sidewalks shall be provided with a planting strip of not less than 800 millimeters in width as a separating strip between the arcaded portion and the open portion of the sidewalk. (See fig. 2)

### **2. Vertical Clearance of Arcade**

- 2.1 The vertical clearance of arcades shall be uniform throughout the entire length of the street within the block or from one street corner to another. (See fig. 3)
- 2.2 The minimum vertical clearance of arcades shall be 3 meters and the maximum shall be 6 meters. (See fig. 1)

### **3. Grade of Sidewalks**

- 3.1 Sidewalks shall, as much as possible, be level and of uniform grade throughout the entire length of the street.
- 3.2 Whenever the slope of the street does not exceed one in twelve ( $\frac{1}{12}$ ) the sidewalk grade shall follow the level or slope of the street. (See fig. 4)

- 3.3 Whenever the slope of the street is one in ten (1/10) the sidewalk shall be maintained level for every 20 to 40 meters of run. Sidewalks of different levels shall be joined by means of a ramp having any convenient slope not exceeding one in six (1/6). (See fig. 6)
- 3.4 When the grade of two connecting sidewalks are between  $\pm$  one in 10 ( $\pm 1/10$ ) and  $\pm$  one in eight ( $\pm 1/8$ ), the two sidewalks shall be joined by means of a ramp having any convenient slope not exceeding one in ten (1/10).

#### 4. Driveways, Entrances and Exits

##### 4.1 Driveways Across Sidewalks

- 4.1.1 To maximize the use of the sidewalk area, the surface of the sidewalk and the driveway shall as much as possible, be at the same place. The entry ramp of the driveway connecting the roadway surface to the sidewalk surface shall have a slope ranging from one in three (1/3) to one in four (1/4). (See figs. 11 and 11-A)
  - 4.1.2 Whenever the height of the curb is more than 200 millimeters, driveways may be constructed across the entire width of the sidewalk, provided that the driveway shall be joined to the sidewalk by means of a ramp of rough finish having a slope of not more than one in eight (1/8). The driveway and the ramp shall be made of the same materials as that of the sidewalk. (See figs. 11 and 11-A and 7)
  - 4.1.3 Driveway underneath arcades may be allowed only underneath cantilevered arcades within the road right-of-way or underneath colonnaded arcades on private properties outside the road right-of-way. (See fig. 8)
- 4.2 Entrances and exits of buildings abutting sidewalks shall be made of either ramps or steps.
- 4.2.1 Entrance or exit ramps shall have a slope not exceeding one in ten (1/10). (See fig. 5)
  - 4.2.2 Entrance or exit ramps shall have treads of not less than 300 millimeters. The minimum number of steps shall be two (2) with risers not exceeding 100 millimeters.
  - 4.2.3 No portion of either entrance or exit ramps or steps intrude into the sidewalk pavement.

#### 5. Obstruction on Sidewalk

Under no circumstances shall obstructions of any kind be allowed on sidewalks, whether open or arcaded.

### **RULE VII - ABATEMENT/DEMOLITION OF BUILDINGS**

## 1. General Building Requirements

- 1.1 All buildings or structures as well as accessory facilities thereto shall conform in all respects to the principles of safe construction and must be suited to the purpose for which they are designed.
- 1.2 Buildings or structures intended to be used for the manufacture and/or production of any kind of article or product shall observe adequate environmental safeguards.
- 1.3 Buildings or structures and all parts thereof as well as all facilities found therein shall be maintained in safe, sanitary and good looking condition.

## 2. Site Requirements

The land or site upon which will be constructed any building or structure, or any ancillary or auxiliary facility thereto, shall be sanitary, hygienic and safe. In the case of sites of buildings intended for use as human habitation or abode, the he same shall be at a safe distance, as determined by competent authorities, from streams or bodies of water and/or sources of air considered to be polluted; from a volcano or volcanic site and/or any other building considered to be a potential source of fire or explosion.

## 3. Dangerous Buildings or Structures

Any building or structure which has any or all of the conditions or defects hereinafter described shall be deemed to be a dangerous building or structure provided that such conditions or defects exist to the extent that life, health, property or safety of the public or its occupants are endangered.

### 3.1 Structural Hazards

- 3.1.1 Whenever any building or structure or portion thereof has been damaged by fire, earthquake, wind, flood, or by any other cause to such an extent that the structural strength or stability thereof is materially less than it was before the catastrophe and is less than the minimum requirements of the National Structural Code for Buildings for new buildings of similar structure, purpose or location.
- 3.1.2 Whenever any portion or member or appurtenance thereof is likely to fall, or to become detached or dislodged or to collapse and thereby injure persons or damage property.
- 3.1.3 Whenever any portion of a building or structure, or any member, appurtenance or ornamentation on the exterior thereof is not of sufficient strength or stability, or is not anchored, attached or fastened in place so as to be capable of resisting a wind pressure of one-half of that specific in the National Structure Code for Buildings for such type of buildings.

- 3.1.4 Whenever any portion thereof has been wrecked, warped, buckled or settled to such an extent that walls or other structural portions have materially less resistance to winds or earthquakes than in required in the case of similar new construction.
- 3.1.5 Whenever the building or structure, or any portion thereof, because of (1) dilapidation, deterioration or decay; (2) faulty construction; (3) the removal, movement or instability of any portion of the ground necessary for the purpose of supporting such building; (4) the deterioration, decay or inadequacy of its foundation; or (5) any other cause, is likely to partially or totally collapse.
- 3.1.6 Whenever the exterior walls or other vertical structural members list, lean or buckle to such an extent that a plumbline passing through the center of gravity does not fall inside the middle one-third of the base.
- 3.1.7 Whenever the building or structure, exclusive of the foundation, shows 33 percent or more damage or deterioration of its supporting member or members, or 50 percent damage or deterioration of its non-supporting members, enclosing or outside walls or coverings.
- 3.1.8 Whenever the building or structure has been so damaged by fire, wind, earthquake or flood, or has become so dilapidated or deteriorated as to become (1) an attractive nuisance to children; (2) a harbor for vagrants, criminals or immoral persons; or as to (3) enable persons to resort thereto for the purpose of committing unlawful or immoral acts.
- 3.1.9 Whenever any building or structure which, whether or not erected in accordance with all applicable laws or ordinances, has in any non-supporting part, member or portion, less than 50 percent or in any supporting part, member or portion less than 66 percent of the (1) strength; (2) fire-resisting qualities or characteristics; or (3) weather-resisting qualities or characteristics required by law in the case of a newly constructed building of like area, height and occupancy in the same location.
- 3.1.10 Whenever any portion of a building or structure remains on a site after the demolition of the building or structure or whenever any building or structure or portion thereof is abandoned for a period in excess of twelve (12) months so as to constitute such building or portion thereof an attractive nuisance or hazard to the public.

## 3.2 Fire Hazards

- 3.2.1 Any building or portion thereof, device, apparatus, equipment, combustible material, or vegetation which may cause fire or explosion, or provide a ready fuel or augment the spread and intensity of fire or explosion arising from any cause.
- 3.2.2 All buildings or portions thereof not provided with the required fire-resistive or fire-protective construction or fire-extinguishing systems or equipment.

- 3.2.3 Whenever any door, aisle, passageway, stairway, or other means of exit is not of sufficient width or size, or is not so arranged as to provide safe and adequate means of exit in case of fire or panic.
- 3.2.4 Whenever any building or structure, because of obsolescence, dilapidated condition, deterioration, damage inadequate exits, lack of sufficient fire-resistive construction, faulty electric wiring, gas connections or heating apparatus, or other cause, is determined by the Building Official to be a fire hazard.

### 3.3 Hazardous Electrical Wiring

- 3.3.1 All wiring systems or installations which do not conform to the rules and regulations embodied in the Philippine Electrical Code.
- 3.3.2 Inadequately maintained or improperly used electrical wiring, outlets, devices and/or equipment.

### 3.4 Hazardous Mechanical Installation

- 3.4.1 Mechanical systems or installations which do not conform to the rules and regulations embodied in the Mechanical Engineering Code of the Philippines
- 3.4.2 Inadequately maintained or improperly used mechanical outlets, devices and/or equipment.
- 3.4.3 Lack of improper operation of required ventilating equipment or air-conditioners.

### 3.5 Inadequate Sanitation and Health Facilities

- 3.5.1 All sanitary and plumbing systems or installations which do not conform to the rules and regulations embodied in the Code on Sanitation and the National Plumbing Code of the Philippines.
- 3.5.2 Inadequately maintained or improperly used sanitary and plumbing facilities.
- 3.5.3 Infestation of insects, vermin, or rodents and lack of adequate control for the same.
- 3.5.4 Lack of adequate garbage and rubbish storage and removal or disposal facilities.
- 3.5.5 Source of pollution.

### 3.6 Improper Occupancy and Architectural Eyesore

- 3.6.1 All buildings or portions thereof used or occupied for purposes other than their intended uses.

3.6.2 Inadequate parking space, as required.

3.6.3 Insufficient amount of natural light and ventilation due to inadequate open spaces such as courts, yards, and setbacks, as required.

3.6.4 Inadequate sizes of rooms and space dimensions and window openings.

3.6.5 Dilapidated, blighted and other unpresentable buildings or structures against generally accepted aesthetic standards.

### 3.7 Improper Location

3.7.1 All buildings or structures or portions thereof which do not conform to the approved land use and zoning plan.

3.7.2 Buildings located in highly volcanic, earthquake or floodprone areas or sites considered to be extremely dangerous.

### 3.8 Illegal Construction

A building or structure shall be deemed to be an illegal construction when it is constructed, existing or is maintained in violation of any specific requirement or prohibition applicable to such building or structure as provided in the National Building Code; the building rules and regulations or in any law or ordinance of the city or municipality relating to the condition and location of the structure and building therein.

## 4. Abatement of Dangerous Buildings

Pursuant to Section 215 of the NBC, when a building or structure is found or declared by the Building Official to be a nuisance is dangerous or ruinous, the Building Official shall order its repair, vacation or demolition depending upon the degree of danger to life, health, safety and/or well-being of the general public and its occupants.

## 5. Procedure for Demolition of Buildings

The following steps shall be observed in the abatement/demolition of buildings under this Rule:

5.1 There must be a finding or declaration by the Building Official that the building or structure is a nuisance, ruinous or dangerous.

5.2 Written notice or advice shall be served upon the owner and occupant/s of such finding or declaration, giving him at least fifteen (15) days within which to vacate or cause to be vacated, repair, renovate, demolish and remove as the case may be, the nuisance, ruinous or dangerous building or structure or any part or portion thereof.

5.3 Within the fifteen-day period, the owner may, if he so desires, appeal to the Secretary the finding or declaration of the Building Official and ask that a re-inspection or re-investigation of the building or structure be made.

5.4 If the appeal is meritorious the Secretary may designate a competent representative/s other than the Building Official to undertake the re-inspection or re-investigation of the building. The representative/s so designated shall make or complete his/their report within a period of thirty days from the date of termination of re-inspection or re-investigation.

5.5 If after-re-inspection, the finding is the same as the original one, the Secretary thru the Building Official shall notify the owner, giving him not more than fifteen days from receipt of notice with affirmed finding to vacate or cause to be vacated and make the necessary repair, renovation, demolition and removal of the subject building or parts thereof, as the case may be.

5.6 The decision of the Secretary on the appeal shall be final.

5.7 Upon failure of the owner to comply with the Order of the Building Official or of the Secretary, in case of appeal, to repair, renovate, demolish and remove the building or any part thereof after fifteen days from the date of receipt of the Order, the Building Official shall cause the building or structure to be repaired, renovated, demolished and removed, partly or wholly, as the case may be, with all expenses therefor chargeable to the owner.

5.8 The building as repaired or in case of demolition, the building materials gathered after the demolition of the building shall be held by the Office of the Building Official until full reimbursement of the cost of repair, renovation, demolition and removal is made by the owner which, in no case, shall extend beyond thirty (30) days from the date of the completion of the repair, renovation, demolition and removal. After such period, said building materials of the building thus repaired, renovated or removed shall be sold at public auction to satisfy the claim of the Office of the Building Official. Any amount in excess of the claim of the government realized from the sale of the building and/or building materials shall be delivered to the owner.

## 6. Other Remedies

The procedures, actions and remedies provided herein are without prejudice to further action that may be taken by the Building Official against the owner/occupants of buildings or structures found or declared to be nuisance/s, dangerous, and/or ruinous under the provisions of Articles 482 and 694 to 707 of the Civil Code of the Philippines.

## **RULE VIII - ADMINISTRATIVE SANCTIONS AND PROCEDURES**

Pursuant to the authority vested in the Secretary, now Minister, of Public Works, under the provisions of Sections 211 and 212 of the national Building Code of the Philippines (P.D. 1096), the following rules and regulations are hereby promulgated to govern the conduct of cases involving the implementation of the Code as well as the enforcement of orders, rules and regulations issued in relation thereto and the imposition of administrative penalties for violations thereof.

1. Definitions - For purposes of this Rule, the following definitions shall apply:

MINISTRY - The Ministry of Public Works,

MINISTER - The head of the Ministry of Public Works.

STAFF - The Building Research and Development Staff (BRDS) organized by and under the Ministry of Public Works, to undertake, by itself or thru appropriate agencies concerned, continuing research and development of building systems in order to develop suitable guidelines and standards, rules and regulations for the effective implementation of the provisions of the National Building Code, and to provide professional and technical assistance to the Secretary, now the Minister of Public works, in the management and supervision of the activities of the Building Officials in the implementation of the Code, including all its referral Code.

EXECUTIVE DIRECTOR - The head officer of the Building Research and Development Staff.

CODE - The National Building Code of the Philippines or Presidential Decree No. 1096.

RULES - The rules and regulations issued and to be issued by the Minister to implement and enforce the provisions of the Code. This includes this Rule.

PERSON - Any individual, partnership, corporation, association and public or private organization of any character.

PERMIT OFFICE - The Office of the Building Official which under the Code is the one single office to handle the processing of applications for, and the issuance of, all kinds of permits pertaining to buildings, both public and private, and all other appurtenances thereto.

APPLICATION - The application for a building permit.

PERMIT - As used in this and other Rules shall mean the principal (building) permit and all the ancillary or accessory permits pertaining to a building and its appurtenances, such as mechanical and electrical permits, sanitary/plumbing permits, and permit to construct a fence, sidewalks, towers, signboards, etc.

2. **Administrative Sanctions:** The code provides the following administrative sanctions to insure observance and compliance with all its provisions:
  - 2.1 Non-issuance, suspension, revocation and/or invalidation of permits.
  - 2.2 Non-issuance, suspension or revocation of certificates of occupancy.
  - 2.3 Issuance of Work Stoppage Order.
  - 2.4 Issuance of Order for Discontinuance of Use or Occupancy of Buildings.
  - 2.5 Abatement and/or demolition of dangerous buildings or structures.
  - 2.6 Imposition of administrative fines.
  - 2.7 Imposition of surcharge/penalty.

3. **Grounds for the Non-issuance, Suspension, Revocation and/or Invalidation of Permit:** the Building Official may order or direct the non-issuance, suspension, revocation and/or invalidation of a permit based on any one or all of the following grounds:

3.1 Errors found in the plans and specifications.

3.2 Incorrect or inaccurate data or information found in the application.

3.3 Non-compliance with terms and conditions of permits.

3.4 Failure to commence the work within a period of one year from the date of issuance of permit.

3.5 Suspension or abandonment of the work so authorized in the permit at anytime after it has been commenced for a period of 120 days or more.

3.6 Unauthorized change, modification or alteration in the approved plans and specifications and/or in the type of construction.

3.7 Failure to engage the services of a duly licensed architect or civil engineer to undertake the full time inspection and supervision of the construction work and/or failure of the licensed architect or civil engineer hired to keep at all times at the jobsite a *logbook* (of the progress of construction).

4. **Grounds for Non-issuance or Revocation of Certificate of Occupancy:**

The Building Official may direct the non-issuance or revocation of certificate of occupancy based on any or all of the following grounds:

4.1 Unauthorized change, modification or alteration in the approved plans and specifications and/or in the type of construction.

4.2 Failure to engage the services of a duly licensed architect or civil engineer to undertake the full time inspection and supervision of the construction work and/or failure of the licensed architect or civil engineer hired to keep at all times at the jobsite a *logbook* (of the progress of construction).

4.3 Failure of the licensed Architect or Civil Engineer who undertook the full time inspection and supervision work to submit the logbook, Certificate of Completion, As-built plans, Specifications, Building Inspection Sheet and Fire Safety Inspection Certificate duly signed and sealed, to the Building Official upon completion of the construction.

5. **Issuance of Work Stoppage Order:** The Building Official shall conduct regular inspection of buildings or structures and their premises within his area of jurisdiction. He may direct or order the stoppage of work based on any or all of the following grounds:

5.1 Non-compliance with terms and conditions of permits.

- 5.2 Unauthorized change, modification or alteration in the approved plans and specifications and/or in the type of construction.
- 5.3 Failure of the licensed Architect or Civil Engineer who undertook the full time inspection and supervision work to submit the logbook, Certificate of Completion, As-built plans, Specifications, Building Inspection Sheet and Fire Safety Inspection Certificate duly signed and sealed, to the Building Official upon completion of the construction.
- 5.4 Erecting, construction, altering, moving, converting, or demolishing a building or structure without a building permit.
- 5.5 Making any alteration, addition, conversion or repair in any building or structure or appurtenance thereto, constructed or installed before the adoption of the Code, whether public or private, without a permit.
- 5.6 Unauthorized change, modification or alteration during construction from the duly approved plans and specifications on which the building permit is based.

6. **Issuance of Order for Discontinuance of Use or Occupancy. The Building Official shall conduct regular inspection of buildings or structures and their premises within his area of jurisdiction. He may direct or order the discontinuance of use or occupancy of buildings or structures based on any or all of the following grounds:**

- 6.1 Dangerous or Ruinous Building specified under Sec. 3 of Rule VII of the Implementing Rules and Regulations.
- 6.2 Use of occupancy of a building without a Certificate of Occupancy even if constructed under a valid building permit.
- 6.3 Change in the existing use or occupancy classification of a building or structure or portion thereof without the corresponding Certificate of Change of Occupancy.

7. **Non-Conforming Use or Occupancy:**

The use of occupancy of any building or structure legally authorized under R.A. 6541 or any existing city or municipal building code or ordinance prior to the adoption of the National Building Code (P.D. 1096) may be continued although such use or occupancy does not conform to the approved land use and/or zoning ordinance.

However, no such non-conforming use or occupancy shall be enlarged or increased or extended to occupy a greater area of land than that already occupied by such building or structure. Neither shall such non-conforming use or occupancy be moved in whole or in part, to any other portion of the lot or parcel of land where such non-conforming use or occupancy exists.

A building/structure whose non-conforming use or occupancy has ceased for more than (1) year, or has been changed to a use permitted in the District/City/Municipality in which it is located, shall not be reviewed as a non-conforming use.

A non-conforming building or structure, or a group of non-conforming buildings or structures related to one use and under one ownership, which have been damaged or destroyed by typhoons, fires, earthquakes, or other calamities, may be reconstructed and used as before provided that such reconstruction is done within twelve (12) months from the date of such damage, and provided, further, that the cost of the reconstruction is not more than twenty percent (20%) of the original construction cost of the buildings or structure.

The structural repair and/or alteration of a non-conforming building/structure may be allowed once subsequent to or after the effectivity of the code and of this Rule provided the total cost thereof shall not exceed twenty percent (20%) of its fair market value, and provided further that such repair/alteration shall be in accordance with the requirements of the Code.

8. **Abatement/Demolition of Dangerous or Ruinous Buildings and Structures:**

When any building or structure is found or declared to be a nuisance, dangerous or ruinous, the Building Official shall order its repair, vacation or demolition depending upon the degree of danger to life, health, safety and/or well-being of the general public and its occupants. the condition or defect that would render any building or structure dangerous or ruinous as well as the procedures for abatement and/or demolition of dangerous buildings or structures are those provided under Rule VII of the Implementing Rules and Regulations.

9. **Imposition of Administrative Fines:**

The Minister or his duly authorized representative may prescribe and impose fees not exceeding ten thousand pesos in the following cases, subject to the terms and procedure as hereunder provided:

- 9.1 Erecting, constructing, altering, repairing, moving converting, or demolishing a building or structure without a building permit.
- 9.2 Making any alteration, addition, conversion or repair in any building or structure or appurtenances thereto, constructed or installed before the adoption of the code, whether public or private, without a permit.
- 9.3 Unauthorized change, modification or alteration during the construction in the duly approved plans and specifications on which the building permit is based.
- 9.4 Non-compliance with work stoppage order and/or orders to effect necessary correction in plans and specifications found defective.
- 9.5 Non-compliance with order to demolish buildings declared to be nuisance, ruinous or dangerous.
- 9.6 Use or occupancy of a building without a Certificate of Occupancy even if constructed under a valid building permit.

- 9.7 Change in the existing use or occupancy classification of a building or structure or portion thereof without the corresponding Certificate of Change of Occupancy.
- 9.8 Failure to post or display the certificate of occupancy in a conspicuous place on the premises of the building as required under Section 309 of the Code.
- 9.9 Change in the type of construction of any building without approval of the Building Official.

10. **Determination of Amount of Fines:**

In the determination of the amount of fines to be imposed for violation under the preceding Section, the Minister or his duly authorized representative shall take into consideration the following:

10.1. Light Violation

10.1.1 Failure to post Certificate of Occupancy

10.2 Less Grave Violations

10.2.1 Non-compliance with work stoppage order for alteration/addition/conversion/repair without permit.

10.2.2 Use of occupancy without Certificate of Occupancy.

10.2.3 Change in existing use or occupancy without Certificate of Change of Occupancy.

10.3 Grave Violations

10.3.1 Unauthorized changes during construction.

10.3.2 Unauthorized change in type of construction from more fire-resistive to less fire-resistive.

10.3.3 Non-compliance with order to abate or demolish

10.3.4 Non-compliance with work stoppage order for construction without permit.

Fines in Pesos (P)    Light Violations    Less Grave Violations    Grave Violations

Category I

Minimum	50	250	500
Medium	50	500	1,000
Maximum	50	1,000	2,000

Category II & III

Minimum	100	1,000	2,000
Medium	100	2,500	5,000
Maximum	100	5,000	10,000

- Note:** \* The Minimum fines shall be imposed for failure to comply with the terms of the 1st notice.  
\* The Minimum fines shall be imposed for failure to comply with the terms of the 2nd notice.  
\* The Minimum fines shall be imposed for failure to comply with the terms of the 3rd and final notice.

**11. Surcharge/ Penalty:** Without prejudice to the provisions of the preceding sections, the Building Official is hereby also authorized to impose a penalty or surcharge in the following cases in such amount and in the manner as hereunder fixed and determined:

11.1 for constructing, installing, repairing, altering or causing any change in the use or occupancy of any building or part thereof or appurtenances thereto without any permit, there shall be imposed a surcharge of 100% of the building permit fee: *Provided*, that when the work in the building or structure is started during the pendency of the final action or pending approval by the Building Official of the application for building permit, the amount of the surcharge shall be according to the following:

- a. Excavation for foundation . . . . . 10%
- b. Construction of foundation (including pile driving and laying of reinforcing bars) . . . . . 25%
- c. Construction of superstructure up to 2 meters above established gate . . . . . 50%
- d. Construction of superstructure above 2 meters . . . . . 100%

*Provided further*, that when the work on the building or structure is started with due notice and advice to the Building Official and after the lapse of thirty (30) days from the date of filing and acceptance of the application for building permit, no surcharge or penalty shall be imposed.

11.2. For failure to pay inspection fee within thirty (30) days from the prescribed date, surcharge of 25% of the inspection fee shall be imposed.

**12. Authority to Enforce Administrative Sanctions:**

Except as otherwise provided in these Rules, the Building Official is hereby designated as the duly authorized representative of the Minister who is empowered to carry out and enforce the above-mentioned administrative sanctions within his area of jurisdiction.

**13. Initiation of Action:**

The Building Official, *motu proprio*, or upon complaint, and after the notice and/or hearing, initiates action towards the non-issuance, suspension, revocation or invalidation of a building permit or a certificate of occupancy, issuance of a work stoppage order or an order for the

discontinuance of the use or occupancy of a building or portion thereof, declaration of a building or structure as ruinous or dangerous and/or the imposition of appropriate fines.

**14. Notice and Answer:**

In case of a protest against a pending application or a complaint alleging violation of any of the terms and conditions of a building permit or certificate of occupancy, or of any provisions of this Code or of the Implementing Rules and Regulations, the Building Official shall immediately notify the respondent in writing the require him to submit a written explanation or answer within a period of not less than five (5) days from the receipt of notice.

**15. Action on the Protest/Complaint:**

If the answer or explanation of the respondent (applicant/permittee/owner of building) is found satisfactory, the Building Official shall dismiss the protest or complaint. If found not satisfactory, he shall personally conduct a formal investigation of the complaint, or designate an investigator to do the same.

**16. The Investigation Proper:** In any contested case or investigation, all parties shall be entitled to notice and hearing. The notice shall be served at least five days before the date of the hearing and shall state the date, time, and place of the hearing. The parties shall also be given opportunity to present evidence and argument on all issues.

**17. Subpoena:** In any investigation, the Building Official shall have the power to require the attendance of witnesses as well as the production of documentary evidence and other pertinent data.

**18. Rules of Evidence:** In any investigation,

18.1 The Building Official may admit and give probative value to evidence as commonly accepted by reasonably prudent men in the conduct of their affairs.

18.2 Documentary evidence may be received in the form of copies or excerpts, if the original is not readily available. Upon request, the parties shall be given opportunity to compare the copies with the original. If the original is in the official custody of a public officer, a certified true copy thereof may be accepted.

18.3 Every party shall have the right to cross-examine witnesses and to submit rebuttal evidence.

18.4 The investigator may take notice of judicially cognizable facts and of generally cognizable technical or scientific facts within his or the witnesses' specialized or professional knowledge.

**19. Inspection Team:**

Whenever the Building Official suspects that a building or structure poses imminent danger or risk to life, limb or property and the public welfare, he shall immediately send an inspection team

to conduct a detailed inspection of the building or structure. The team shall submit a report within ten (10) days.

**20. Closure of Building:**

Based on the findings and recommendations of the inspection team, in accordance with any or all of the conditions enumerated under Sec. 3 of Rule VII of the Implementing Rules and Regulations, the Building Official may direct or order the closure of the building.

**21. Lifting of Order or Closure:**

The Building Official shall order the lifting of the closure only after the defects or deficiencies of the subject building or structure have been duly corrected.

**22. Decision - Form and Service Thereof:**

Every decision , order or notice of non-issuance, suspension or revocation of a building permit/certificate of occupancy shall be in writing, and shall state specifically the reason/s or ground/s therefore. The Building Official shall decide each case within fifteen (15) days following the termination of the investigation. The parties concerned shall be notified of the decision in writing by courier or by registered mail.

**23. Finality of Order/Decision:**

The order or decision of the Building Official shall become final and executory fifteen (15) days after receipt of a copy thereof by the party adversely affected unless within that period, an administrative appeal has been perfected. In which case, the fifteen (15) day period shall be suspended accordingly. If a motion for reconsideration is denied, the movant shall have the right to perfect his appeal during the remainder of the period for appeal, reckoned from the date of receipt of the resolution of denial. If the order for decision is reversed on reconsideration, the aggrieved party, if there is any, shall have fifteen (15) days from receipt of the resolution within which to perfect his appeal.

**24. Appeal:**

Within fifteen (15) days from the date of receipt of notice or advice of the non-issuance, suspension or revocation of permit and/or certificate of occupancy or nay order or decision of the Building Official, the applicant/permittee or any adversely affected party may file an appeal directly with the Minister or through the nearest Public Works Regional Director. The Minister shall render his decision with the technical assistance of the Executive Director and his staff and/or call upon any officer in the Ministry to initially act on the appeal.

**25. Finality of Decision of Minister:**

the order or decision of the Minister in any case brought to him on appeal shall be final and shall become executory fifteen (15) days after the receipt of the parties concerned of a copy thereof.

**26. Police Assistance in the Execution of Order/Decision:**

For the enforcement and execution of any of his orders or decisions, the Minister or his duly authorized representative may secure the assistance of the local police or any peace officer in the locality or area where the building or structure is located, in accordance with the Memo of Agreement dated August 1, 1978 between the Minister of the National Defense and Minister of Public Works, Transportation and Communications.

**27. Disposition of Fines**

All fines and other surcharges collected by the Building Official under this Rule shall be treated in the same manner as the building fees and charges authorized by the Minister to be collected and received under Section 208 of the Code.

**28. Other Remedies and Supplementary Effect of Other Laws:**

The rights, actions, remedies and procedures provided in this Rule shall be without prejudice to further action that the Minister and/or the Building Official may take under the provisions of Articles 482 and 694 to 707 of the civil code of the Philippines. Furthermore, all other rights of action and remedies that may be available under existing laws shall, if applicable, have a supplementary effect thereto.

**RULE IX - ELECTRICAL REGULATIONS**

Pursuant to Sections 102, 103 and 1301 of the National Building code (PD 1096) the following Rules shall govern the installation of Primary and Secondary Distribution Lines, Transformers and other equipment in subdivisions, along public and private roads and attached to or over buildings.

1. General Location Requirements in Towns, Subdivisions, Human Settlements, Industrial Estates and the like.

Overhead transmission and/or distribution lines/systems including transformers, poles, towers and the like shall be located and installed following the latest standards of design, construction and maintenance. However, in the interest of public safety, convenience, good viewing and aesthetics may be located and installed along alleys or back streets so as not to cause visual pollution.

2. Location of Poles and Clearances of Power Lines along Public Roads.

2.1 All poles erected on public roads shall be covered by Approved Pole Location (APL) plan from the Highway District City/Municipal Engineer.

2.2 Poles and transformer supports shall be located not more than 500 mm inside from the road right-of-way or property line, and shall not obstruct the sidewalk, pedestrian path and/or the road drainage canal or structure, existing or proposed.

- 2.3 Primary lines shall have a minimum vertical clearance of 10 M from the crown of the pavement when crossing the highway and 7.5 M from the top of the shoulder or sidewalk when installed along the side of the highway or street in a highly urbanized areas.
- 2.4 Secondary, neutral and service lines shall have a minimum vertical clearance of 7.5 M from the crown of the road pavement when crossing the highway and from the top of the shoulder or sidewalk when installed along the side of the highway or street in highly urbanized areas. 25. Clearances of Supporting Structures such as Poles, Towers, and others and their guys and braces measured from the nearest parts of the objects concerned:

A. From fire Hydrants, not less than 5 M.

B. From Street Corners, where hydrants are located at street corners, poles and towers shall not be set so far from the corners as to make necessary the use of flying taps which are inaccessible from the poles.

C. From Curbs, not less than 150 mm measured from the curb away from the roadway.

NOTE: Guy wires and other structures shall in no way be installed as to obstruct pedestrian and/or vehicular traffic.

### **3. Attachments on and Clearances from Buildings**

3.1 Attachments for support of power lines and cables, transformers and other equipment and/or communications lines installed on building shall be covered by an Approved Attachment Plan from the local Building Official.

3.2 Where the buildings exceed 15 M in height, overhead lines shall be arranged where practicable so that a clear space or zone at least 2 M wide will be left, either adjacent to the building or beginning not over 2.5 M from the building, to facilitate the rising of ladders where necessary for fire fighting.

EXCEPTION: This requirement does not apply where it is the rule of the local fire department to exclude the use of ladders in alleys or other restricted places which are generally occupied by supply lines.

### **4. Open Supply Conduction Attached to Buildings**

Where the permanent attachment of open supply conductors of any class to buildings is necessary for an entrance such conductors shall meet the following requirements:

4.1 Conductors of more than 300 volts to ground shall not be carried along or near the surface of the building unless they are guarded or made inaccessible.

4.2 To promote safety to the general public and to employees not authorized to approach conductors and other current-carrying parts of electric supply lines, such parts shall be

arranged so as to provide adequate clearance from the ground or other space generally accessible, or shall be provided with guards so as to isolate them effectively from accidental contact by such persons.

- 4.3 Ungrounded metal-sheathed service cables, service conduits, metal fixtures and similar non-current-carrying parts, if located in urban districts and where liable to become charged to more than 300 volts to ground, shall be isolated or guarded so as not to be exposed to accidental contact by unauthorized persons. As an alternative isolation or guarding noncurrent-carrying parts shall be solidly or effectively grounded.
- 4.4 Clearance of wires from building surface shall be not less than those required in Table II.

**TABLE II. Clearances of Supply Conductors from Buildings**

(1) For spans 0 - 45 M, the clearances shall be as given in Table II.

VOLTAGE OF SUPPLY CONDUCTORS IN METERS	HORIZONTAL CLEARANCE	VERTICAL CLEARANCE
300 TO 8,700 volts	1.0	2.5
More than 8,700 to 1,500 volts	2.5	2.5
More than 15,000 to 50,000 volts	3.0	3.0
Exceeding 50,000 volts	3.0 plus 10 mm per Kv in excess	3.0 plus 10 mm per Kv in excess

- (2) Where the span length exceeds 45 M the increased clearances required by Rule 232, B, 1 of the PEC shall be provided.
- 4.5 Supports over buildings. Service-drop conductors passing over a roof shall be securely supported by substantial structure. where practicable, such supports shall be independent of the building.

**5. Conductors Passing By or Over Buildings**

- 5.1 Minimum Clearances. Unguarded or accessible supply conductors carrying voltages in excess of 300 volts may be run either beside or over buildings. The vertical or horizontal clearance to any building or its attachments (balconies, platforms), etc.) shall be as listed below. The horizontal clearance governs above the roof level to the point where the diagonal equals the vertical clearance requirement. This rule should not be interpreted as restricting the installation of a trolley contact conductor over the approximate center line of the track it serves. (See Fig. 1)
- 5.2 Guarding of Supply Conductors/Supply Conductors of 300 volts or more shall be properly guarded by grounded conduit, barriers, or otherwise, under the following conditions:
  - 1) Where the clearances set forth in Table II above cannot be obtained.

- 2) Where such supply conductors are placed near enough to windows, verandas, fire escapes, or other ordinarily accessible places within the reach of persons. NOTE: Where the required clearances cannot be obtained, supply conductors shall be of Grounded Metallic Shield, Jacketed Primary Cables groups or bundled and supported by grounded messenger wires.

**Table III. Minimum Clearance in Any Direction From Line Conductors to Supports, and to vertical or Lateral Conductors, Span or Guy Wires Attached to the Same Support**

(All voltages are between conductors)

Clearance of line conductors from - generaljointly for each used poles	Communication Lines		Supply Lines				In
	mm	mm	mm	mm	mm	mm	
On used poles			0 to 8,700 volts	8,700 volts, add	1,000 volts of excess	Exceeding	In General jointly
Vertical and Lateral conductors:							
Of same circuit . . . . .	75	75	75	75	75	6.25	
Of other circuits . . . . .	75	75	75	75	75	10	
Span and guy wires attached to same pole:							
General . . . . .	75	150	150	150	150	10	
When parallel to line . .	75	150	150	300	300	10	
Lightning-protection wires parallel to line				10			
Surfaces of crossarms . . . . .	75	75	75	75	75	5	
Surfaces of poles . . . . .	75	125	75	125	125	5	

**6. Clearance of Service Drops**

- 6.1 Service drop conductors shall not be readily accessible and when not in excess of 600 volts, shall conform to the following:

- a) Clearances Over Roof. Conductors shall have a clearance of not less than 2.5 M from the highest point of roofs over which they pass with the following exceptions:

**Exception No. 1.** Where the voltage between conductors does not exceed 300 volts and the roof has a slope of not less than 100 mm in 300 mm, the clearance may not be less than 1 M.

**Exception No. 2.** Service drop conductors of 300 volts or less which do not pass over other than a maximum of 1.2 M of the overhand portion of the roof for the purpose of terminating at a through-the-roof service raceway or approved support may be maintained at a minimum of 500 mm from any portion of the roof over which they pass.

- 6.2 Clearance from Ground. Conductors shall have a clearance of not less than 3 M from the ground or from any platform or projection from which they might be reached.
- 6.3 Clearance from Building Openings. Conductors shall have a horizontal clearance of not less than 1 M from windows, doors, porches, fire escapes, or similar locations and shall be run at least 500 mm above the top level of a window or opening.
- 6.4 Service Drop of communication lines, when crossing a street, shall have a clearance of not less than 5.50 meters from the crown of the street or sidewalk over which it passes. Service Drop of communication lines shall have a minimum clearance of 3.00 meters above ground at its point of attachment to the building or pedestal.
- 6.5 No parts of swimming and wading pools shall be placed under existing service-drop conductors or any other over-head wiring; nor shall such wiring be installed above the following:
- a) Swimming and wading pools and the area extending 3.00 meters outward horizontally from the inside of the walls of the pool.
  - b) Diving Structures
  - c) Observation stands, towers or platforms

## 7. Wiring Methods

Service entrance conductors extending along the exterior or entering buildings or other structures shall be installed in rigid steel conduit or asbestos cement conduit or concrete encased plastic conduit from point of service drop to meter socket and from meter socket to the disconnecting equipment. However, where the service entrance conductors are protected by approved fuses or breakers at their outer ends (immediately after the service drop or lateral) they may be installed in any of the recognized wiring methods.

- 7.1 Abandoned Lines and/or portions of lines no longer required to provide service shall be removed.
- 7.2 Power or communication poles, lines, service drops and other line equipment shall be free from any attachment for antennas, signs, streamers and the like.
- 7.3 Metallic sheaths or jackets of overhead power or communication cables shall be grounded at a point as close as possible to ground level whenever such cables change from overhead to underground installations.

## **8. Transformers**

### **8.1 Oil-Insulated Transformers Installed Outdoors.**

Combustible material, combustible buildings and parts of buildings, fire escapes, door and window openings shall be safeguarded from fires originating in oil-insulated transformers installed on, attached to, or adjacent to a building of combustible material. Space separations, fire-resistant barriers and enclosures which confine the oil of a ruptured transformer tank are recognized safeguards. One or more of these safeguards shall be applied according to the degree of hazard involved in cases where the transformer installation presents a fire hazard. Oil enclosures may consist of fire-resistant dikes, curbed areas or basins, or trenches filled with coarse, crushed stone. Oil enclosures shall be provided with trapped drains in cases where the exposure and the quantity of oil involved are such that removal of oil is important.

### **8.2 Dry-Type Transformers Installed Indoors.**

Transformers rated 112-1/2 KVA or less shall have separation of at least 300 mm from combustible material unless separated therefrom by a fire-resistant heat-insulating barrier, or unless of a rating not exceeding 600 volts and completely enclosed except for ventilating openings. Transformers of more than 112-1/2 KVA rating shall be installed in a transformer room of fire-resistant construction unless they are constructed with Class B (80°C rise) or Class H (150°C rise) insulation, and are separated from combustible material not less than 1.85 M horizontally and 3.7 M vertically or are separated therefrom by a fire-resistant heat-insulating barrier. Transformers rated more than 35,000 volts shall be installed in a vault.

### **8.3 Askarel-Insulated Transformers Installed Indoors.**

Askarel-insulated transformers rated in excess of 25 KVA shall be furnished with a pressure-relief vent. Where installed in a poorly ventilated place they shall be furnished with a means for absorbing any gases generated by arcing inside the case, or the pressure relief vent shall be connected to a chimney or flue which will carry such gases outside the building. Askarel-insulated transformers rated more than 35,000 volts shall be installed in a vault.

### **8.4 Oil-Insulated Transformers Installed Indoors.**

Oil-insulated transformers shall be installed in a vault constructed as specified in this Section except as follows:

- 8.4.1 NOT OVER 112-1/2 KVA TOTAL CAPACITY. The provisions for transformer vaults specified in Section 9.3 of this Rule apply except that the vault may be constructed of reinforced concrete not less than 100 mm thick.
- 8.4.2 NOT OVER 600 VOLTS. A vault is not required provided suitable arrangements are made where necessary to prevent a transformer oil fire igniting other materials, and the total transformer capacity in one location does not exceed 10 KVA in a section of the building classified as combustible, or 75 KVA where the surrounding structure is classified as fire-resistant construction.
- 8.4.3 FURNACE TRANSFORMERS. Electric furnace transformers of a total rating not exceeding 75 KVA may be installed without a vault in a building or room of fire-resistant construction provided suitable arrangements are made to prevent a transformer oil fire spreading to other combustible material.
- 8.4.4 DETACHED BUILDING. Transformers may be installed in a building which does not conform with the provisions specified in this Code for transformer vault, provided neither the building nor its contents present fire hazard to any other building or property, and provided the building is used only in supplying electric service and the interior is accessible only to qualified persons.

8.5 **Guarding.** Transformers shall be guarded as follows:

- 8.5.1 MECHANICAL PROTECTION. Appropriate provisions shall be made to minimize the possibility of damage to transformers from external causes where the transformers are located exposed to physical damage.
- 8.5.2 CASE OR ENCLOSURE. Dry-Type transformers shall be provided with a non-combustible moisture resistant case or enclosure which will provide reasonable protection against accidental insertion of foreign objects.
- 8.5.3 EXPOSED LIVE PARTS. The transformer installation shall conform with the provisions for guarding of live parts in PEC Rule 1056.
- 8.5.4 VOLTAGE WARNING. The operating voltage of exposed live parts of transformer installations shall be indicated by signs or visible markings on the equipment or structures.

## 9. Provisions for Transformers Vaults

- 9.1 **New Building.** New buildings requiring an expected load demand of 200 KVA or above shall be provided with a transformer vault, except that transformers may be mounted on poles or structures within the property if enough space is available, provided that all

clearances required can be obtained and no troublesome contamination on insulators, bushings, etc. can cause hazards and malfunctioning of the equipment.

9.2 **Location.** Transformer and transformer vaults shall be readily accessible to qualified personnel for inspection and maintenance. Vaults shall be located where they can be ventilated to the outside air without using flues or ducts wherever such an arrangement is practicable.

9.3 **Walls, Roof and Floor.** The walls and roofs of vaults shall consist of reinforced concrete not less than 150 mm thick, masonry or brick not less than 200 mm thick, or 300 mm load bearing hollow concrete blocks. The inside wall and roof surface of vaults constructed of hollow concrete blocks shall have a coating of cement or gypsum plaster not less than 20 mm thick. The vault shall have a concrete floor not less than 100 mm thick. Building walls and floors which meet these requirements may serve for the floor, roof and one or more walls of the vaults. Other forms of fire-resistive construction are also acceptable provided they have adequate structural strength for the conditions and a minimum fire resistance of two and one-half hours according to the approved Fire Test Standard. The quality of the material used in the construction of the vault shall be of the grade approved by the Building Official having jurisdiction.

9.4 **Doorways.** Any doorway leading from the vault into the building shall be protected as follows:

9.4.1 **TYPE OF DOOR.** Each doorway shall be provided with a tight-fitting door of a type approved for openings in such locations by the authority enforcing this Code.

9.4.2 **SILLS.** A door sill or curb of sufficient height to confine within the vault, the oil from the largest transformer shall be provided and in no case shall the height be less than 100 mm.

9.4.3 **LOCKS.** Entrance doors shall be equipped with locks, and doors shall be kept locked, access being allowed only to qualified persons. Locks and latches shall be so arranged that the door may be readily and quickly opened from the inside.

10. **Ventilation.** Ventilation shall be adequate to prevent a transformer temperature in excess of the prescribed values.

10.1 **Ventilation Openings.** When required, openings for ventilation shall be provided in accordance with the following:

10.1.1 **LOCATION.** Ventilation openings shall be located as far away as possible from doors, windows, fire escapes and combustible material.

10.1.2 **ARRANGEMENT.** Vaults ventilated by natural circulation of air may have roughly half of the total area of openings required for ventilation in one or more openings near the floor and the remainder in one or more openings in the roof or in the sidewalls near the roof; or all of the area required for ventilation may be provided in one or more openings in or near the roof.

- 10.1.3 **SIZE.** In the case of vaults ventilated to an outdoor area without using ducts or flues the combined net area of all ventilating openings after deducting the area occupied by screens, gratings, or louvers, shall be not less than .006 sq. mm per KVA of transformer capacity in service, except that the net area shall be not less than 0.1 sq. m. for any capacity under 50 KVA.
- 10.1.4 **COVERING.** Ventilation openings shall be covered with durable gratings, screens, or louvers, according to the treatment requirement required in order to avoid unsafe conditions.
- 10.1.5 **DAMPERS.** Where automatic dampers are used in the ventilation openings of vaults containing oil-insulated transformers, the actuating device should be made to function at a temperature resulting from fire and not a temperature which might prevail as a result of an overheated transformer or bank of transformers. Automatic dampers should be designed and constructed to minimize the possibility of accidental closing.
- 10.1.6 **DUCTS.** Ventilating ducts shall be constructed of fire resistant material.
- 10.1.7 **DRAINAGE.** Where practicable, vaults containing more than 100 KVA transformer capacity shall be provided with a drain or other means which will carry off any accumulation of oil or water in the vaults unless local conditions make this impracticable. the floor shall be pitched to the drain when provided.
- 10.1.8 **WATER PIPES AND ACCESSORIES.** Any pipe or duct system foreign to the electrical installation should not enter or pass through a transformer vault. Where the presence of such foreign system cannot be avoided, appurtenances thereto which require maintenance at regular intervals shall not be located inside the vault. Arrangements shall be made where necessary to avoid possible trouble from compensation, leaks and breaks in such foreign system. Piping or other facilities provided for fire protection or for water-cooled transformers are not deemed to be foreign to the electrical installation.

## 11. CAPACITORS

- 11.1 **Application.** This Section applies to installation of capacitors on electric circuits in or on buildings.

**Exception No. 1.** Capacitors that are components of other apparatus shall conform to the requirements for such apparatus.

**Exception No. 2.** Capacitors in hazardous locations shall comply with additional requirements in PEC Section 400-415.

- 11.2 **Location.** An installation of capacitors in which any single unit contains more than three gallons of combustible liquid shall be in a vault conforming to part C of PEC Section 319.

- 11.3 Mechanical Protection. Capacitors shall be protected from physical damage by location or by suitable fences, barriers or other enclosures.
- 11.4 Cases and Supports. Capacitors shall be provided with non-combustible cases and supports.
- 11.5 Transformers Used With Capacitors. Transformers which are components of capacitor installations and are used for the purpose of connecting the capacitor to a power circuit shall be installed in accordance with PEC Section 319. The KVA rating shall not be less than 135 per cent of the capacitor rating in Kvar.

## 12. Emergency Systems

- 12.1 The provisions of this Section shall apply to the installation, operation and maintenance of circuits, systems and equipment intended to supply illumination and power in the event of failure of the normal supply or in the event of accident to elements of a system supplying power and illumination essential for safety to life and property where such systems or circuits are required by the Fire Code, or by any government agency having jurisdiction.

Emergency systems are generally installed in places of assembly where artificial illumination is required, such as buildings subject to occupancy by large numbers of persons, hotels, theaters, sports arenas, hospitals and similar institutions. Emergency systems provide power for such functions as refrigeration, operation of mechanical breathing apparatus, ventilation essential to maintain life, illumination and power for hospital room, fire alarm systems, fire pumps, industrial processes where current interruption would produce serious hazards, public address systems and other similar functions.

- 12.2 All requirements of this Section shall apply to emergency systems.
- 12.3 All equipment for use on emergency systems shall be properly approved.
- 12.4 Tests and Maintenance
  - a) The authority having jurisdiction shall conduct or witness a test on the complete system upon completion of installation, and periodically afterwards.
  - b) Systems shall be tested periodically in accordance with a schedule acceptable to the authority having jurisdiction to assure that they are maintained in proper operating condition.
  - c) Where the battery systems or unit equipment are involved, including batteries used for starting or ignition in auxiliary engines, the authority having jurisdiction shall require periodic maintenance.
  - d) A written record shall be kept of such tests and maintenance.

- 12.5 Emergency systems shall have adequate capacity and rating for the emergency operation of all equipment connected to the system.
- 12.6 Current supply shall be such that in the event of failure of the normal supply to or within the building or group of buildings concerned, emergency lighting or emergency power, will be immediately available. The supply system for emergency purposes may be composed of one or more of the types of systems covered in Section 12.7 to Section 12.10 of this Rule. Unit equipment in accordance with Section 12.21 shall satisfy the applicable requirements of this Section.

Consideration must be given to the type of service to be rendered; whether for short duration, as for exit lights of a theater, or for long duration, as for supplying emergency power and lighting during long periods of current failure from trouble either inside or outside the buildings, as in the case of a hospital.

Assignment of degree of reliability of the recognized emergency supply system depends upon the careful evaluation of the variables of each particular installation.

- 12.7 A storage battery of suitable rating and capacity shall supply, by means of a service installed according to Section 200 of the PEC and maintained at not more than 90 per cent of system voltage, the total load of the circuits supplying emergency lighting and emergency power for a period of at least 1/2 hour.

Batteries, whether of the acid or alkali type, shall be designed and constructed to meet the requirements of the emergency service. Lead-acid type batteries shall include low gravity acid (1.20 to 1.22 SP. GR.), relatively thick and rugged-plated and separators, and a transparent jar.

- 12.8 A generator set driven by some form of prime mover, with sufficient capacity and proper rating to supply circuits carrying emergency lighting or lighting and power, equipped with suitable means for automatically starting the prime mover on failure of the normal service shall be provided. For hospitals, the transition-time from instant of failure of the normal power source to the emergency generator source shall not exceed ten seconds. (See Section 12.4).
- 12.9 There shall be two services, each in accordance with Section 200 of the PEC, widely separated electrically and physically to minimize the possibility of simultaneous interruption of power supply arising from an occurrence within the building or group of buildings served.
- 12.10 Connections on the line side of the main service shall be sufficiently separated from said main service to prevent simultaneous interruption of supply through an occurrence within the building or group of buildings served.
- 12.11 The requirements of Section 12.5 and Section 12.6 also apply to installations where the entire electrical load on a service or sub-service is arranged to be supplied from a second source. Current supply from a standby power plant shall satisfy the requirements of availability in Section 12.6.

12.12 Audible and visual sign devices shall be provided, where practicable, for the following purposes:

- a) To give warning of dearrangement of the emergency or auxiliary source.
- b) To indicate that the battery or generator set is carrying a load.
- c) To indicate when a battery charges is properly functioning.

12.13 Only appliances and lamps specified as required for emergency use shall be supplied by emergency lighting circuits.

12.14 Emergency illumination shall be provided for all required exit lights and all other lights specified as necessary for sufficient illumination.

Emergency lighting systems should be so designed and installed that the failure of any individual lighting element, such as the burning out of a light bulb, shall not leave any area in total darkness.

12.15 Branch circuits intended to supply emergency lighting shall be so installed as to provide service immediately when the normal supply for lighting is interrupted. Such installations shall provide either one of the following:

- a) An emergency lighting supply, independent of the general lighting system with provisions for automatically transferring to the emergency lights by means of devices approved for the purpose upon the event of failure of the general lighting system supply.
- b) Two or more separate and complete systems with independent power supply, each system providing sufficient current for emergency lighting purposes. Unless both systems are used for regular lighting purposes and are both lighted, means shall be provided for automatically energizing either system upon failure of the other. Either or both systems may be part of the general lighting system of the protected occupancy if circuits supplying lights for emergency illumination are installed in accordance with other Sections of this Rule.

12.16 For branch circuits which supply equipment classed as emergency, there shall be an emergency supply source to which the load will be transferred automatically and immediately upon the failure of the normal supply.

12.17 Emergency circuit wiring shall be kept entirely independent of all other wiring and equipment and shall not enter the same-raceway, box or cabinet with other wiring except:

- a) In transfer switches, or
- b) In exit or emergency lighting fixtures supplied from two (2) sources.

12.18 The switches installed in emergency lighting circuits shall be so arranged that only authorized persons have control of emergency lighting, except:

a) Where two or more single throw switches are connected in parallel to control a single circuit, at least one of those switches shall be accessible only to authorized persons.

b) Additional switches which act only to put emergency lights into operation but not to disconnect them may be permitted.

Switches connected in series and three-and four-way switches shall not be allowed.

12.19 All manual switches for controlling emergency circuits shall be located at the most accessible place to authorized persons responsible for their actuation. In places of assembly, such as theaters, a switch for controlling emergency lighting systems shall be located in the lobby or at a place conveniently accessible therefrom.

In no case shall a control switch for emergency lighting in a theater for motion picture projection be placed in the projection booth or on the stage. However, where multiple switches are provided, one such switch may be installed in such locations and so arranged that it can energize but not disconnect for the circuit.

12.20 Lights on the exterior of the building which are not required for illumination when there is sufficient daylight may be controlled by an automatic light-actuated device approved for the purpose.

12.21 In hospital corridors, switching arrangements to transfer corridor lighting in patient areas of hospitals from overhead fixtures to fixtures designed to provide night lighting may be permitted, provided that the switching system is so designed that switches can only select between two sets of fixtures but cannot extinguish both sets at the same time.

12.22 The branch-circuits over current devices in emergency circuits shall be accessible to authorized person only.

12.23 Where permitted by the authority having jurisdiction, in lieu of other methods specified elsewhere in this Section, individual unit equipment for emergency illumination shall consist of:

a) Battery

b) Battery charging means, when a storage battery is used.

c) One or more lamps, and

d) A relaying device arranged to energize the lamps automatically upon failure of the normal supply to the building.

Unit equipment shall be permanently fixed in place (i.e. not portable) and shall have all wiring to each unit installed in accordance with the requirements of any of the wiring

methods discussed in Chapter II of the PEC. They shall not be connected by flexible cord. The supply circuit between the unit equipment and the service, the feeders or the branch circuit wiring shall be installed as required by Section 12.17. Emergency illumination fixtures which obtain power from a unit equipment which are re not part of the unit equipment shall be wired to the unit equipment as required by Rule 5257 of the PEC and in accordance with the one of the wiring methods described in Chapter II of the PEC.

### 13. EFFECTIVITY

- 13.1 All primary and secondary supply lines already existing shall comply with the provisions of this Rule within two (2) years from the effectivity of this Rule.
- 13.2 Transformers to be installed on, attached to, or in buildings shall comply with the requirements of this Rule. transformer installations already existing shall comply with the requirements within two (2) years from the effectivity of this Rule. 13.3 Non-compliance with the provisions of this Rule shall be subject to the penal provisions in Section 213 of PD 1096.

### **RULE X - MECHANICAL REGULATIONS**

1. Definitions - For purposes of this Rule, the following definitions shall apply:

**ACCIDENTAL CONTACT** - Any inadvertent physical contact with power transmission equipment, prime movers, machines or machine parts which could result from slipping, falling, sliding, tripping or any other unplanned action or movement.

**AIR CONDITIONING** - The process of treating air so as to control simultaneously its temperature, humidity, cleanliness and distribution to meet the requirements of the conditioned space.

**BALLUSTRADES** - The frames on either side of the moving steps of an escalator.

**BOILER** - A closed vessel for heating water or for application of heat to generate steam or other vapor to be used externally or to itself.

**BUFFER** - A device designed to stop a descending car or counterweight beyond its normal limit of travel by absorbing and dissipating the kinetic energy of the car or counterweight.

**CAGE/CAB** - An enclosure for housing the operator and the hoisting mechanism, power plant and equipment controlling a crane.

**CAPACITY OF WORKS, PROJECT OR PLANT** - The total horsepower of all engines, motors, turbines or other prime movers installed, whether in operation or not.

**CAR** - The load-carrying unit of an elevator including its platform, frame, enclosure and door or gate.

**COMPRESSOR** - A mechanical device for the purpose of increasing the pressure upon the refrigerant.

**CONDENSER** - A vessel or arrangement of pipes or tubing in which vaporized refrigerant is liquified by the removal of heat.

**CONDEMNED BOILER OR UNFIRED PRESSURE VESSEL** - A boiler or unfired pressure vessel that has been inspected by the Building Official and declared unsafe or disqualified and power stamped or marked designating its rejection.

**CRANE** - Means a machine for lifting or lowering a load and moving it horizontally, the hoisting mechanism being an integral part of the machine.

**DUCT** - A passageway made of sheet metal or other suitable material not necessarily leak tight, for conveying air or other gases at low pressure.

**DUMBWAITER** - A hoisting and lowering mechanism equipped with a car not to exceed 3861 sq. cm. in area and a maximum height of 1.20 m., the capacity of which does not exceed 277 kilos, used exclusively for carrying materials.

**ELEVATOR** - A hoisting and lowering mechanism equipped with a car or platform which moves in guides in a vertical direction serving two or more floors of a building or structure. Movement of the car may be controlled by gravitational, manual or mechanical power.

**ELEVATOR LANDING** - That portion of a floor, balcony or platform for loading or discharging passengers or freight to or from the elevator.

**ELEVATOR WIRE ROPES** - Steel wire ropes attached to the car frame or passing around sheaves attached to the car frame from which elevator/dumbwaiter cars and their counterweights are suspended.

**ENCLOSED** - Means that the moving parts of a machine are so guarded that physical contact by any part of the human body is precluded or prevented. This does not however prohibit the use of hinged, sliding or otherwise removable doors or sections to permit inspection, lubrication or proper maintenance.

**ESCALATOR** - A power driven, inclined, continuous stairway for raising or lowering passengers.

**EVAPORATION** - That part of the AC/Refrigeration system in which liquid refrigerant is vaporized to produce refrigeration.

**EXTERNAL INSPECTION** - An inspection made on a boiler during operation.

**GUARDED** - Shielded, fenced or otherwise protected by means of suitable enclosure guards, covers or standard railings, so as to preclude the possibility of accidental contact or dangerous approach to persons or objects.

**HOIST** - An apparatus for raising or lowering a load by the application of a building force, but does not include a car or platform. It may be based-mounted, hook suspension, monorail, overhead, simple drum type or trolley suspension.

**HOISTWAY** - A shaftway for the travel of one or more elevators or dumbwaiters.

**INTERNAL INSPECTION** - An inspection made when a boiler is shut down, with hand-holes, manholes, or other openings opened or removed to permit inspection of the interior.

**LIQUID RECEIVER** - A vessel permanently connected to a system by inlet and outlet pipes for storage of a liquid refrigerant.

**LOCOMOTIVE BOILER** - A boiler mounted on a self-propelled track locomotive used to furnish motivating power for traveling on rails.

**LOW PRESSURE HEATING BOILER** - A boiler operated at pressures not exceeding 1.05 kg/sq.m. with steam or water temperature not exceeding 250°F.

**MACHINE** - The driven unit of an equipment.

**MACHINE HOUSE** - An enclosure for housing the hoisting mechanism and power plant.

**MACHINE PARTS** - Any or all moving parts of a machine.

**MECHANICAL EQUIPMENT, MACHINERY OR PROCESS** - Includes steam engines, internal combustible engines, boilers, turbines, crushers, mills, mixers, pumps, compressors, cranes, conveyors, hoists, elevators, escalators, dumb waiters, pipe lines, line-shaftings, air conditioning, refrigeration, ventilation, pressure vessels and the like.

**MECHANICAL WORKS, PLANT** - Includes steam plants, internal combustion engine plants, hydraulic power plants, pumping plants, refrigerating plants, air conditioning plants, mill shops, factories, foundries shipyards, etc. containing any mechanical equipment, machinery or process, driven by steam, internal or external combustion fuel, electricity, gas, air, water, heat, chemicals or other prime movers.

**MOVING WALK** - A type of horizontal passenger-carrying device on which passengers stand or walk, with its surface remaining parallel to its direction of motion and is uninterrupted.

**POINT OF OPERATION** - That part of a machine which performs an operation on the stock or material and/or that place or location where stock or material is fed to the machine. A machine may have more than one point of operation.

**PORTABLE BOILER** - An internally fired boiler which is self-contained, primarily intended for temporary location.

**POWER TRANSMISSION MACHINERY** - A shaft, wheel, drum, pulley, system of fast and loose pulleys, coupling, clutch, driving belt, V-belt sheaves and belts, chains and sprockets, gearing, torque connectors, conveyors, hydraulic couplings, magnetic couplings, speed reducers

or increases or any device by which the motion of an engine is transmitted to or received by another machine. **PRIME MOVER** - An engine or motor operated by steam, gas, air, electricity, liquid or gaseous fuels, liquids in motion or other forms of energy whose main function is to drive or operate, either directly or indirectly, other mechanical equipment.

**PROCESS MACHINE** - An equipment designed and operated for a specific purpose.

**REFRIGERANT** - A substance which produces a refrigerating effect by its absorption of heat while expanding or evaporating.

**TON OF REFRIGERATION** - The useful refrigerating effect equal to 12,000 BTU/hour; 200 BTU/minute.

**TRAVELING CABLE** - A cable made up of electric conductors which provides electrical connection between an elevator or dumbwaiter car and a fixed outlet in the hoistway.

**UNFIRED PRESSURE VESSEL** - A vessel in which pressure is obtained from an external source or from in indirect application of heat.

**VENTILATION** - Process of supplying or removing air by natural or mechanical means to or from any space.

## 2. Guarding of Moving and Dangerous Parts:

All prime movers, machines and machine parts, power transmission equipment shall be so guarded, shielded, fenced or enclosed to protect any person against exposure to or accidental contact with dangerous moving parts.

## 3. Cranes:

3.1 Access to the case or machine house shall be by means of a conveniently placed stationary ladder, stairs or platforms requiring a step-over, that no gap exceeding 300 millimeters is allowed.

3.2 Adequate means shall be provided for cranes having revolving cabs or machine houses, to permit the operator to enter or leave the crane cab and reach the ground safely, irrespective of its position.

3.3 Cages, cabs or machine houses on cranes shall be enclosed to protect operator during inclement weather.

3.4 A gong or other effective warning device shall be mounted on each care or cab.

3.5 Temporary crane operation without warning device may be allowed provided there is a flagman whose sole duty is to warn those in the path of the crane or its load.

- 3.6 The maximum rated load of all cranes shall be plainly marked on each side of the crane. If the crane has more than one hoisting unit, each hoist shall have marked on it or its load block, its rated capacity clearly legible from the ground or floor.

#### 4. Hoists:

- 4.1 Operating control shall be plainly marked to indicate the direction of travel.
- 4.2 Each cage controlled hoist shall be equipped with an effective warning device.
- 4.3 Each hoist designed to lift its load vertically shall have its rated load legibly marked on the hoist or load block or at some easily visible space.
- 4.4 A stop, which shall operate automatically, shall be provided at each switch, dead end rail or turntable to prevent the trolley running off when the switch is open.
- 4.5 Each electric hoist motor shall be provided with an electrically or mechanically operated brake so arranged that the brake will be applied automatically when the power is cut off from the hoist.

#### 5. Elevators:

- 5.1 Hoistways for elevators shall be substantially enclosed throughout their height, with no openings allowed except for necessary doors, windows or skylights.
- 5.2 Ropes, wires or pipes shall not be installed in hoistways, except when necessary for the operation of the elevators.
- 5.3 Hoistway pits shall be of such depth that when the car rests on the fully compressed buffers, a clearance of not less than 600 millimeters remains between the underside of the car and the bottom of the pit.
- 5.4 When four or more elevators serve all or the same portion of a building, they shall be located in not less than two (2) hoistways and in no case shall more than four (4) elevators be located in any one hoistway.
- 5.5 Where a machine room or penthouse is provided at the top of a hoistway, it shall be constructed with sufficient room for repair and inspection. Access shall be by means of an iron ladder or stairs when the room is more than 600 millimeters above the adjacent floor or roof surface. The angle of inclination of such ladder or stairs shall not exceed 60° from the horizontal. This room shall not be used as living quarters or depository of other materials and shall be provided with adequate ventilation.
- 5.6 Minimum number of hoisting ropes shall be three (3) for traction elevators and two (2) for drum type elevators.
- 5.7 The minimum diameter of hoisting and counterweight ropes shall be 30 millimeters.

- 5.8 Elevators shall be provided with over-load relay and reverse polarity relay.
- 5.9 In high-rise apartments or residential condominiums of more than five (5) stories, at least one passenger elevator shall be kept on 24-hour constant service.

## 6. Escalators

- 6.1 The angle of inclination of an escalator shall not exceed 35° from the horizontal.
- 6.2 The width between balustrades shall not be less than 558 millimeters nor more than 1.20 meters. This width shall not exceed the width of the steps by more than 330 millimeters.
- 6.3 Solid balustrades of incombustible material shall be provided on each side of the moving steps. If made of glass, it shall be of tempered type glass.
- 6.4 Each balustrade shall be provided with a handrail moving in the same direction and at the same speed as the steps.
- 6.5 The rated speed, measured along the angle of inclination, shall be not more than 38 mpm.
- 6.6 Starting switches shall be key operated and located within sight of escalator steps.
- 6.7 Emergency buttons shall be conspicuously and accessibly located at or near the top and bottom landings but protected from accidental contact.

## 7. Boilers and Pressure Vessels:

### 7.1 Location of Boilers.

- 7.1.1 Boilers may be located inside buildings provided that the boiler room is reinforced concrete or masonry and that the boiler room shall not be used for any other purpose.
  - 7.1.2 In case the main building is not made up of fire resistive materials, boilers shall be located outside the building at a distance of not less than 3.00 meters from the outside wall of the main building and the building housing the boiler shall be made up of fire resistive materials.
  - 7.1.3 No part of the boiler shall be closer than one meter from any wall.
  - 7.1.4 Fire tube boilers shall be provided with sufficient room for removal/replacement of tubes either thru the front or rear.
- 7.2 Smokestacks whether self-supporting or guyed, shall be of sufficient capacity to handle duel gases, shall be able to withstand a wind load of 175 km per hour and shall rise at least 5 meters above the eaves of any building within a radius of 50 meters.

- 7.3 Manufacturers/assemblers of boilers/pressure vessels/pressurized water heaters shall stamp each vessel on the front head or on any other suitable location with the name of the manufacturer, serial number, maximum allowable working pressure, heating surface in sq. m. and year of manufacture.
- 7.4 Boilers of more than 46 sq. m. heating surface shall each be provided with two means of feeding water, one steam driven and one electrically driven, one pump and one injector.
- 7.5 Two check valves shall be provided between any feed pumps and the boiler in addition to the regular shut-off valve.
- 7.6 Where two or more boilers are connected in parallel, each steam outlet shall be provided with a non-return valve and a shut-off valve.
- 7.7 Boiler rooms shall have at least two separate exits.
- 7.8 In no case shall the maximum pressure of an old/existing boiler be increased to a greater pressure than would be allowed for a new boiler of same construction.
- 7.9 Each boiler shall have at least one safety valve. For boilers having more than 46 sq. meters pressure of water heating surface or a generating capacity exceeding 907 kg. per hour, two (2) or more safety valves shall be required.
- 7.10 Each boiler shall have a steam gauge, with a dial range of not less than 1-1/2 times and not more than twice the maximum allowable working pressure. It may be connected to the steam space or to the steam connection to the water column.
- 7.11 Whenever repairs/replacements are made on fittings or appliances, the work shall comply with the section on New Installation of the Philippine Medical Engineering Code.
- 7.12 After a permit has been granted to install a boiler/pressure vessel/pressurized water heater upon payment of the installation fees thereof, it shall be the duty of the Building Official to make periodic inspection of the installation to determine compliance with the approved plans and specifications.
- 7.13 Upon the completion of the installation, the Building Official shall conduct an inspection and test, after which a certificate of operation for a period not exceeding one year shall be issued upon payment of the required inspection fees.
- 7.14 The Building Official shall notify the owner in writing of the intended date of the annual inspection at least 15 days in advance. However, the owner may request a postponement in writing of said inspection and the Building Official shall fix a date for inspection agreeable to both, but not to exceed 30 days from the intended date.
- 7.15 The owner or user of a boiler shall prepare the same for inspection by cooling it down, blanking off all connections to adjacent boilers, removing all soot and ashes from tubes, heads, shell, furnace and combustion chamber. the owner shall assist the Building Official by providing all labor and equipment required during said inspection.

## 8. Refrigeration and Air Conditioning:

- 8.1 The temperature and humidity of the air to be used for comfortable cooling shall be maintained at 68-74°F effective temperature at an air movement from 4.57 to 7.60 MPM within the living zone.
- 8.2 Water from evaporators, condensers and other machinery shall be properly collected into a suitable water or drainage system.
- 8.3 Ducts shall be constructed entirely of non-combustible materials such as steel, iron, aluminum or other approved materials. Only fire retardant lining shall be used on the inside of ducts.
- 8.4 Access doors shall be provided at all automatic dampers, fire dampers, thermostats and other apparatus requiring service and inspection in the duct system.
- 8.5 Where ducts pass thru walls, floors or partitions, the space around the duct shall be sealed with fire resistant material equivalent to that of the wall, floor or partition, to prevent the passage of flame or smoke.
- 8.6 When the ducts or the outlets or inlets to them pass through fire walls, they shall be provided with automatic fire dampers on both sides of the fire wall through which they pass.
- 8.7 Fire doors and fire dampers shall be arranged to close automatically and remain tightly closed, upon the operation of a fusible link or other approved heat actuated device, located where readily affected by an abnormal rise of temperature in the duct.
- 8.8 Each refrigerating system shall be provided with a legible metal sign permanently attached and easily accessible, indicating thereon the name of manufacturer or installer, kind and total number of kgs. of refrigerant contained in the system and field test pressure applied.
- 8.9 In refrigerating plants of more than 45 kg. refrigerant, masks and helmets shall be used. These shall be kept in a suitable cabinet outside the machine room when not in use.
- 8.10 Not more than 136 kgs. of refrigerant in approved containers shall be stored in a machine room at any given time.
- 8.11 Where ammonia is used, the discharge may be into a tank of water, which shall be used for no other purpose except ammonia absorption. At least one gallon of water shall be provided for every 0.4536 kg. of ammonia in the system.
- 8.12 Refrigerant piping crossing a passageway in any building shall not be less than 2.3 meters above the floor.
- 8.13 In a refrigerating system containing more than 9 kgs., stop valves shall be installed in inlets and outlets of compressors, outlets of liquid receivers, and in liquid and suction branch header.

- 8.14 Window type Acs shall be provided with drain pipe or plastic tubing for discharging condensate water into a suitable container.
- 8.15 Window type AC installed on ground floors of buildings shall not be less than 2.13 meters from the ground.
- 8.16 Wind type Acs shall be provided with exhaust ducts if the exhaust is discharged into corridors/hallways/arcades/sidewalks etc.
- 8.17 Window type ACs installed along corridors/hallways above the first floor shall not be less than 2.13 meters above the floor level.

9. Water Pumping for Buildings/Structures:

- 9.1 Installation of pumping equipment to supply buildings/structures from existing water supply system shall only be allowed if there is always water in the mains.
- 9.2 To maintain water pressure in all floors of a building/structure, the following systems may be used:
  - 9.2.1 Overhead tank supply - may be installed above the roof supported by the building/structure or on a separate tower.
    - 9.2.1.1 Water tanks shall be provided with a vent and an overflow pipe leading to a storm drain and shall be fully covered.
  - 9.2.2 Pneumatic tank - an unfired pressure vessel, initially full of air, into which water from mains is pumped.
    - 9.2.2.1 A suitable pressure which shall stop the pump when pressure required is attained.
    - 9.2.2.2 Tanks shall be designed for twice the maximum total dynamic pressure required.
    - 9.2.2.3 An air volume control device shall be installed to maintain correct air volume inside the tank.

10. Pipings:

- 10.1 Piping shall, as much as possible, run parallel to building walls.
- 10.2 Grouped piping shall be supported on racks, on either horizontal or vertical planes.
- 10.3 Piping on racks shall have sufficient space for pipe or chain wrenches so that any single line can be altered/repaired/replaced without disturbing the rest.

- 10.4 Piping 100 millimeters in diameter and above shall be flanged. Smaller sized pipes may be screwed.
- 10.5 Piping subjected to varying temperatures shall be provided with expansion joints.
- 10.6 Galvanized piping shall not be used for steam.
- 10.7 Piping carrying steam, hot water liquids shall not be embedded in concrete walls or floors and shall be properly insulated to prevent accidental scalding to persons and to minimize heat loss.
- 10.8 Color coding of piping shall be as follows:
  - 10.8.1 Steam Division - High Pressure - White
    - Exhaust system - Buff
  - 10.8.2 Water Division - Fresh water, low pressure - Blue
    - Fresh water, high pressure - Blue
    - Salt water piping - Green
  - 10.8.3 Oil Division - Delivery - Brass or Bronze
    - Discharge - Yellow
  - 10.8.4 Pneumatic Division - All piping - Gray
  - 10.8.5 Gas Division - All piping - Black
  - 10.8.6 Fuel Oil Division - All piping - Black
  - 10.8.7 Refrigerating Division- Pipes - Black
    - Fittings - Black

NOTE: All cases not specifically covered by this Rule shall be in accordance with the Philippine Mechanical Engineering Code.

## **RULE XI - ACCESS STREETS/ROADS AND ALLEYS**

Pursuant to Section 704 of the National Building Code (P.D. 1096), no building shall be constructed unless it adjoins or has direct access to a public space, yard or street on at least one of its sides. All buildings shall face a public street, alley or a private road which has been duly approved by the proper authorities.

Said access streets, alleys or roads shall have the following widths:

1. Interior or rear lots shall have an access road with a minimum width depending upon the number of buildings or units which it serves subject to approval of the local planning authority, provided, however, that said access street or road shall not be less than three meters (3.00M) in width.
  
2. Multiple Living Units on Same lot on which apartments, rowhouses or accessorias or a group of single-detached buildings are built shall be provided with an access road directly connection said buildings or units to a public street or alley following the schedule below:
  - a) Up to six (6) units . . . . . 3.00 M. wide
  - b) Seven (7) up to fifteen (15) units . . . . . 3.00 M. wide
  - c) Sixteen (16) up to Twenty-five (25) units . . . . . 3.00 M. wide
  - d) Twenty-six (26) up to thirty -five (35) units . . . . . 3.00 M. wide
  - e) More than thirty-five (35) units . . . . . 3.00 M. wide

Privately-owned access roads shall be duly registered and annotated in the lot title as such for as long as the said apartments, rowhouses, etc., exist.

All kinds of subdivisions and residential condominiums shall comply with the rules and regulations on access roads promulgated by the National Housing Authority (NHA).

**RULE XII - CEMETERIES AND MEMORIAL PARKS**

Pursuant to Sections 102 and 103 of the National Building Code (PD 1096), for the protection of buyers or lessees of lots in cemeteries and memorial parks as well as the owners/operators of cemeteries or memorial parks, the following rules shall govern the establishment of cemeteries and memorial parks.

1. Definitions - For purposes of this Rule, the following definitions shall apply:

**CEMETERY** - Public or private land used for the burial of the dead and other uses dedicated for cemetery purposes, to include landscaped grounds, driveways, walks, columbarium, crematories, mortuaries meausoleums, niches, graveyards and public comfort rooms.

**MEMORIAL PARK** - A privately-owned cemetery with well kept landscaped lawns and wide roadways and footpaths separating the areas assigned for ground interments, tombs, mausoleums and columbariums; with or without a mortuary chapel; and provided with systematic supervision and maintenance.

**CINERARIUM** - A niche in a tomb or columbarium to accommodate an urn containing the ashes of a cremated body.

**CINERARY REMAINS** - The ashes resulting from cremation of a dead body.

CENOTAPH - An empty tomb or monument erected to the dead.

COLUMBARIUM - A sepulchre with niches for cinerary remains.

GRAVEYARD - A cemetery or portion of a cemetery reserved for ground interments or burials.

HEADSTONE - The stone or marker at the head of a grave, usually in standing position.

LOT - A unit area in a cemetery used either for ground interment or for the erection of a mausoleum or tomb.

MARKER - A cross, stake, tablet, made of wood, stone or concrete to mark a grave.

MAUSOLEUM - A large stately tomb to accommodate one or more interments, usually with provisions for an ossuary or a cinerarium.

MEMORIAL - A monument, marker, tablet, headstone, tombstone, private mausoleum or tomb for family or individual use.

NICHE - Interment space for cinerary remains.

OSSUARY - The interment space for bones of the dead.

SEPULCHRE - A burial place solidly built of stone or concrete.

TABLET - A small flat slab of marble or similar material containing an inscription, usually laid flat on the ground.

TOMB - An above ground sepulchre without roof or canopy.

TOMBSTONE - A stone with inscription marking a place of burial.

VAULT - the interment receptacle for coffins, of reinforced concrete, covered and sealed, whether sunk into the ground or to rest on the ground.

## 2. Location of Cemeteries:

- 2.1 Cemeteries shall be located in accordance with the approved land use plan of the city/municipality concerned. Prior clearance shall be obtained from the Ministry of Health, the National Water Resources Council and the National Pollution Control Commission.
- 2.2 As much as possible, cemeteries shall be situated at the peripheries of communities, away from centers of population or municipal poblaciones, at least one (1) kilometers away from main thoroughfares.

- 2.2.1 Whenever possible, two or more municipalities sharing common boundaries between them should have a common cemetery situated at a central site accessible from any of the municipalities.
  - 2.3 A buffer strip 25 meters wide inward from and along the property line of the cemetery shall be provided and planted to trees. No burial is allowed within the buffer strip.
  - 2.4 No cemetery shall be located less than 50 meters from any source of water supply, wells, fresh water rivers, streams, creeks, lakes or lagoons. Neither shall wells be dug at any point less than 50 meters from existing cemeteries.
  - 2.5 Cemeteries shall be located only on ground where the water table is not higher than 4.25 meters below the ground surface. Where this is not possible, the cemetery shall be situated not less than 300 meters downhill, and not less than 1000 meters uphill from any surface well or source of potable water supply, neither shall they be located within the watershed of a potable water supply system.
3. Layout and Landscaping:
  - 3.1 The cemetery shall be totally enclosed by a perimeter fence of strong material, and all gates provided with a strong door and lock. Perimeter walls shall not exceed 3.00 meters in height. Where a cemetery is enclosed by a solid reinforced concrete wall at least 2 meters high, but not exceeding 3.00 meters, it is allowed to construct tombs, vaults, mausoleums or other types of sepultures for the dead up to the walls. Otherwise a clearance of 5 meters shall be maintained between the perimeter fence and the nearest interment plot.
  - 3.2 Where the cemetery lot abuts a busy thoroughfare, there shall be a setback of sufficient distance to provide enough parking space to admit all funeral traffic for five (5) simultaneous funerals without spillage to the thoroughfare.
  - 3.3 Roads Inside Cemeteries:
    - 3.3.1 For local cemeteries, there shall be a main road of 2 meters minimum width from the main gate straight to the rear of the cemetery for pedestrian traffic. Cross roads of 1 meter minimum width shall be laid out to divide the cemetery into sections.
    - 3.3.2 For memorial parks, roadways shall be at least 8 meters wide, laid out in such a manner that the farthest interment site shall at least be within 60 meters walking distance from any roadway as the shape of the park lot allows. However, in no case shall the farthest interment site be more than 90 meters from any roadway. Pathways not less than one meter wide shall be provided through park sections on both sides of roadways, for the safety and convenience of pedestrians. In case of park sections where the farthest interment lot is less than thirty (30) meters from the nearest roadway, no pathway shall be required. There shall be a minimum setback or easement of one meter from the edge of the roadway to the nearest lot line.

- 3.4 The cemetery area shall be well graded with a view to provide efficient drainage for the area.
- 3.5 Adequate space shall be provided for tree planting.
- 3.6 A chapel with a floor area of at least 50 sq.m. (5 m. x 10 m.) shall be constructed at a convenient location within the cemetery where funeral ceremonies may be held and incidentally serve as haven for funeral participants against sun and rain.

4. Interments, Burials and Entombments:

- 4.1 For ground interments, there shall be a minimum depth of excavation of 1.5 meters from ground level to base of excavation. However, if concrete vaults are used, the minimum depth of excavation from base of vault to ground level shall be 1.0 meters. Ground interments shall be allowed only in designated graveyard areas of the cemetery and may be provided with suitable markers, headstones or memorials.
- 4.2 Vaults for tombs and mausoleums for above-ground interments shall be of solid reinforced concrete. Concrete hollow blocks or any unit masonry construction of ceramics, adobe or the like shall not be allowed for the construction of above-ground vaults; tombs or mausoleums. Mausoleums may be provided with ossuary along the interior walls.
- 4.3 Multi-level interment niches shall only be of solid reinforced concrete construction, of not less than 150 millimeters thickness in which case they may be allowed to abut walls of the cemetery, provided the walls are of solid reinforced concrete construction. Concrete hollow blocks, or any unit masonry construction of ceramics, adobe or the like shall not be allowed.
- 4.4 Before construction is started on any mausoleum, canopy over a tomb. or multi-level niches, a building permit shall be secured therefor from the Office of the Building Official.
- 4.5 Horizontal of columbaria shall be of reinforced concrete of at least 50 millimeters thickness. Vertical divisions may be of concrete hollow blocks of at least 100 millimeters thickness, in which case, cement mortar shall be applied evenly to present a non-porous surface. Minimum dimensions of individual cineraria shall be 300 mm by 300 mm by 460 mm. Cinerary remains shall be placed inside tightly sealed urns.

**RULE XIII - HANDLING AND STORAGE OF PHOTOGRAPHIC  
AND X-RAY FILMS**

In addition to the provisions of Section 1410 of the National Building Code (PD 1096) on the handling and storage of photographic and X-ray films, the following rules and regulations shall govern:

1. Definitions: - For purposes of this Rule, the following definitions shall apply:

CELLULOSE ACETATE BASE - Safety photographic and X-ray film identified by the marking on the edge of the film, which shows plainly before and after developing.

CELLULOSE NITRATE FILM - Film using cellulose nitrate (pyroxilim) as component chemical in its processing.

CELLULOSE NITRATE OR PYSOXYLIN - A substance obtained by treating cellulose with nitric acid used in making explosives, lacquers, etc.

PHOTOGRAPHIC FILM - Any film used in photography or motion picture.

X-RAY FILM - Film used in X-ray machines.

FILM LABORATORY - A room where processing of films and others related therewith are performed.

FILM VAULT - A room specially designed for safekeeping and storage of films.

ICC - Any container approved by International Commerce Commission for shipping any liquid, gaseous or solid material of a flammable, toxic or other hazardous nature.

FIRE ASSEMBLY - The assembly of a fire door, fire window or fire damper, including all required hardware, anchorage, frames and sills.

SELF-CLOSING FIRE ASSEMBLY - A fire assembly which may remain in an open position and which will close automatically if subjected to either of the following conditions:

1. An increase in temperature
2. Products of combustion other than heat

SHUTTER - An assembly made of incombustible material installed on openings except on exit doors and exhaust ducts for the prevention of spread of fire.

## 2. Film Laboratory

### 2.1 Construction

2.1.1 Areas in which photographic processes performed shall be completely enclosed. The walls shall be not less than 100 millimeters thick load bearing concrete hollow blocks or equivalent. Ceiling shall be of 60 millimeter asbestos board hung on or supported by metal frames.

2.1.2 The floor shall be of reinforced concrete of not less than 211 kg./sq.cm. rendered smooth and should be not less than 50 millimeters below the level of the main floor.

### 2.2 Doorways

Every film laboratory shall have at least two (2) doorways set apart by not less than one-third (1/3) the perimeter of the room. In case the maximum travel distance is seven (7.00) meters or less, one door will suffice. Each doorway shall be not less than six hundred (600) millimeters wide and two (2.00) meters high and equipped with a self-closing fire door assembly constructed of 44.5 millimeter solid wooden panel lines on the inside with 6.35 millimeter thick asbestos board or its equivalent. Such doors shall not be equipped with any latch and shall open outward leading to proper exits.

### 2.3 Shutters

Every opening in laboratory walls, every fresh air inlet, excluding exit doors and exhaust ducts, shall be provided with a self-closing fire shutter of not less than 2.4 millimeter thick metal sheet or its equivalent. Shutters shall overlap at least 25 millimeter on all sides of openings and shall be arranged to slide without binding in guides constructed of material equal to the shutter in strength and fire-resistance. Shutters may be omitted when only acetate safety film is used.

### 2.4 Ventilation

- 2.4.1 Film laboratories shall be well ventilated by either natural or mechanical means.
- 2.4.2 Ventilation systems shall be controlled from within and shall have pilot lights to indicate operation. The ventilation system serving the processing room may be extended to cover rooms associated therewith. Ducts shall be constructed entirely of non-combustible materials such as steel, iron, aluminum or other approved materials. Only fire retardant lining shall be used on the inside of ducts.

## 3. Film Vaults

- 3.1 Vaults shall be constructed with walls, floors and roofs of 211 kg/sq. meters reinforced concrete not less than 150 millimeters thick.
- 3.2 Vaults shall be properly ventilated either by natural or mechanical means. If mechanically ventilated, the system shall be controlled from within.
- 3.3 Vaults shall be provided with doors made up of 3.2 millimeter thick steel sheets with 50 millimeter asbestos fiber insulation in between. Such doors shall easily be opened from inside.
- 3.4 Vaults holding over 34 kilograms of film shall be provided with automatic fire extinguishing system.

## 4. Film Cabinets

- 4.1 All film cabinets shall be constructed of metal either welded or bolted. No solder shall be used. All shelves and fixtures shall be of incombustible materials.

- 4.2 Films stored in cabinets shall be placed in individual roll containers or ICC containers. However, if stored in cabinets with individual insulated compartments, they need not be placed inside individual containers.

**RULE XIV - OCCUPANT LOADS**

Pursuant to Section 1207 of the National Building Code, (PD 1096), the following rules and regulations shall govern the determination of occupant loads. For purposes of this Rule, the term Occupant Load shall mean the total number of persons that may occupy a building or a portion thereof at any one time.

- 1. Determination of Occupant Load - The occupant load in any building or portion thereof for the purpose of resolving the required number of exits shall be determined by dividing the floor area assigned to that use by the unit area per occupant set forth in Table A.
  - 1.1 When the unit area per occupant for any particular occupancy is not provided for in the Table, the Building Official shall determine the same based on the unit area for the occupancy which it most nearly resembles.
  - 1.2 The occupant load of any area having fixed seats shall be determined by the number of fixed seats installed. Aisles serving the fixed seats in said area shall not be included in determining the occupant load.
  - 1.3 The occupant load permitted in a building or portion thereof may be increased above that specified in the Table if the necessary exits are provided.
  - 1.4 In determining the occupant load, all portions of a building shall be presumed to be occupied at the same time.
    - 1.4.1 **Exception** - Accessory use areas which ordinarily are used only by persons who occupy the main areas of an occupancy shall be provided with exits as though they were completely occupied. However, in computing the maximum allowable occupant load for the floor/building, the occupant load of the accessory area/s shall be disregarded.

**Table A: General Requirements for Occupant Loads and Exits\***

USE OR OCCUPANCY	UNIT AREA PER (Sq.M.)	Minimum of two Exits other than elevators are required where number of occupants is over
A. Dwellings	28	10
B. Hotels	18.6	10
Apartments	18.6	10

Dormitories	18.6	10
C. Classrooms	1.8	50
Conference Rooms	1.4	50
Exhibit Rooms	1.4	50
Gymnasias	1.4	50
School Shops	4.6	50
Vocational Institutions	4.6	50
Laboratories	4.6	50

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USE OR OCCUPANCY	UNIT AREA PER (Sq.M.)	Minimum of two Exits other than elevators are required where number of occupants is over
D. Hospitals **, Sanitaria**	8.4	5
Nursing Homes**	7.4	5
Children's Homes**	7.4	5
Homes for the Aged**	7.4	5
Nurseries for Children	3.25	6
E. Stores - Retail Sales Rooms		
Basement	2.8	50
Ground Floor	2.8	50
Upper Floors	5.6	10
Offices	9.3	30
Aircrafts hangars (no repair)		46.5      10
Parking Garages	18.6	30
Dining Establishments	1.4	30
Kitchens (Commercial)	18.6	50
F. Warehouses	28	30
Mechanical Equipment Rooms	28	30
G. Garages	9.3	10
H. Auditoriums	.65	50
Theaters	.65	50
Churches & chapels	.65	50
Dance Floors	.65	50
Reviewing Stands	.65	50
Stadia	.65	50

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NOTE:

- \* In all occupancies, floors above the first story having an occupant load of more than ten (10) shall not have less than two (2) exits.
- \*\* Institutional Sleeping Departments shall be based on one occupant per eleven (11) sq. meters of the gross floor area; In-patient Institutional Treatment Departments shall be based on one occupant per twenty-two (22) square meters of gross floor area.

## **RULE XV - PROTECTION AND SAFETY REQUIREMENTS FOR CONSTRUCTION AND DEMOLITION**

Pursuant to Sections 1101 to 1108 of the National Building Code (PD 1096), the following rules and regulations shall provide minimum standards of safety and protection for construction and/or demolition of buildings/structures. The provisions of this Rule shall apply to all work in connection with the construction, alteration, repair, renovation, removal and demolition of building/structures.

### 1. General

- 1.1 The construction, erection, alteration and removal of scaffolds and the application, installation and setting up of safeguards and equipment devices shall be done by skilled workmen under the supervision of a person qualified by experience or training for such work.
- 1.2 A safeguard, device or piece of equipment which is unsafe shall be reported to the superintendent or foreman, who shall take immediate steps to remedy such condition or remove such safeguard, device or equipment.
- 1.3 Scaffolds, ladders, stairs, fuel gas tanks and other devices or equipment falling within the scope of this Rule shall be maintained in a good, safe and usable condition as long as in use.
- 1.4 No scaffolds, ladders, railings or other devices or equipment or any part thereof required by this Rule shall be removed, altered or weakened when required by the work unless so ordered by the superintendent or foreman in charge.
- 1.5 Scaffolds, temporary floors, ramps, stairway landings, stair treads, and all other walkway surface shall be kept free from protruding nails and splinters. They shall be kept free from unnecessary obstructions so that the workers may move about safely.
- 1.6 Protruding nails and tie wire ends shall be removed, hammered in or bent in a safe condition.
- 1.7 Electric lines, moving ropes and cable gears, or similar hazards with which a worker might come in contact shall be encased or protected.
- 1.8 No person, firm or corporation, either personally or through an employee or agent of another, shall operate or move any machinery, equipment, material, scaffolds, or materials in process of assembly closer than 5.00 meters to any energized high voltage overhead electrical facilities except with the approval of the electric inspector.

- 1.9 All workmen on any demolition job shall be furnished with and be required to wear industrial safety helmets.
- 1.10 Construction sheds and tool boxes shall be so located as to protect workers from dangerous falling walls and other falling objects.
- 1.11 The Building Official may permit the use of alternative methods and/or devices depending on local conditions provided that the minimum standard of safety sought to be achieved under this Rule is not jeopardized.

2. Protective Methods/Devices shall be provided in accordance with the conditions hereunder:

2.1 Table 1

Height of Construction	Distance from Construction	Protection Required
2.40 meters or less	Less than 1.80 meters	Railing
	1.80 meters or more	None
More than 2.40 meters	Less than 1.80 meters	Fence and Canopy
	1.80 meters or more but not more than one-fourth the height of construction	Fence and Canopy
	1.80 meters or more, but between one-fourth to one-half the height of construction	Fence
	1.80 meters or more but exceeding one-half the construction height	None

2.2 Fence

- 2.2.1 When the horizontal distance between the outermost face of the building and the inner edge of the sidewalk is more than one-half the height of the building, only a fence shall be required. (See Fig. 1).
- 2.2.2 Fences shall entirely enclose the construction/demolition site.
- 2.2.3 Fences shall be built solid for its full length except for such openings as may be necessary for proper execution of the work. Such openings shall be provided with doors which shall be kept closed at all times except when in actual use.
- 2.2.4 Fences shall be erected on the building side of sidewalks or walkways and shall be made of approved materials (e.g. G.I. sheet, wooden boards and/or planks,

plywood or "Lawanit", sawali) not less than 2.40 meters in height above the curb line.

## 2.3 Canopy

- 2.3.1 When the horizontal distance between the outermost face of the building and the inner edge of the sidewalk is equal to or less than one-half the height of the building, a canopy shall be required in addition to a fence. (see Fig. 2)
- 2.3.2 The protective canopy shall have a clear unobstructed height of 2.40 meters above the wallway and shall be made of sufficient strength and stability to sustain safely the weight of materials that may be placed thereon, and to withstand shocks incident to the handling of such materials or their preparation for use, and accidental jars from trucks passing or delivering materials.
- 2.3.3 When the canopy is used for the storage of materials or for the performance of work of any kind, substantial railings not less than 1.00 meter high and solid toe boards not less than 300 millimeters high shall be placed along the street side and ends of the canopy. The canopy shall be capable of safely sustaining a load of 800 kg. per sq. m. or the intended load to be placed thereon, whichever is bigger.
- 2.3.4 The deck flooring of a canopy shall consist of planking not less than 50 millimeters in thickness, closely laid. All members of the canopy shall be adequately braced and connected to resist displacement of members or distortion of the framework.
- 2.3.5 Canopies shall be constructed solid for its entire length except for such openings as may be necessary for loading purposes. Such openings shall be kept closed at all times except during actual loading operation.
- 2.3.6 Unless the top deck of the canopy is built solidly against the face of the building/structure to be constructed/demolished, the vertical face of the canopy supports next to the building shall be solidly fenced throughout in accordance with Section 2.2 of this Rule, except for such openings as may be necessary for the execution of work. Such openings as may be necessary for the execution of work shall be provided with sliding or swinging gates which shall be kept closed at all times except when in actual use. (See Figs. 4, 5a, 5b & 6).
- 2.3.7 The street side of the canopy shall be kept open for a height of not less than 2.40 meters above the curb. The underside of the canopy shall be properly lighted at night with not less than one 100-watt bulb every 6.00 meters of its length and at each change of grade or elevation of the sidewalk surface.
- 2.3.8 Where a wall of the building abuts or fronts a street, fans or catch platforms shall be erected along that wall at the level of the first floor of the building above the street level. Fans or catch platforms shall be erected at the level of other floors of the building as may be necessary to prevent nuisance from dust or danger from falling debris or materials.

## 2.4 Protective Nets/Screens

- 2.4.1 When the horizontal distance between the outermost face of the building and the outer edge of the sidewalk is less than one-half the height of the building, a protective net extending from the uppermost part of the construction/demolition to ground level shall be required in addition to a fence and canopy. (See Fig. 3)
- 2.4.2 Wherever required, protective netting/covering shall be of approved and substantially strong material such as G.I. wire gauge 16,38 millimeters mesh nylon net, canvas.
- 2.4.3 Where a wall of the building abuts or fronts a street, dust screens shall be erected to cover the entire wall so as to prevent nuisance from dust.

## 2.5 Walkways and Railings

- 2.5.1 Where the sidewalk is permitted by the Building Official to be fully occupied and fenced-off or enclosed, a temporary walkway adjacent to the curb line shall be required. Where the street has no sidewalk, a temporary walkway adjacent to the street line not more than 1.20 meters wide shall be provided. Where the road right-of-way is 5.00 meters or less, no temporary walkway shall be allowed.
- 2.5.2 The width of the walkway shall be not less than 1.20 meters but not more than one-third (1/3) the width of the sidewalk. Where only partial occupancy and fencing-off of the sidewalk is necessary, a temporary walkway will not be required provided that a width of at least 1.20 meters of the sidewalk is left open for the use of pedestrians.
- 2.5.3 Walkways shall be capable of supporting a uniform live load of 650 kg. per sq.m. A durable wearing surface shall be provided and maintained along the entire length of the walkway throughout the duration of the construction/demolition period.
- 2.5.4 Where the walkway occupies part of the roadway protective railings on the street side shall be required.
- 2.5.5 Where the walkway is adjacent to an excavation, protective railings on the excavation side shall be required.
- 2.5.6 Railings, where required, shall be built substantially strong and sturdy and shall be not less than 1.00 meter in height.

## 2.6 Warning Signs and Lights

- 2.6.1 At every construction/demolition site warning signs shall be conspicuously posted around the property. Warning signs shall be adequately illuminated at night for the protection of unwary pedestrians.

- 2.6.2 All entrances/exits to and from the construction/demolition site shall be kept closed at all times except during actual passage of men, materials or equipment. Red warning lights shall be installed at all entrances/exits which shall be kept lighted at night and during periods of unusual darkness.
- 2.6.3 all warning signs and lights shall be properly maintained even when operations are not in progress.
- 2.6.4 All areas of danger in demolition operations shall be properly enclosed and danger signs posted. Watchman shall be provided to warn workers or impending dangers and all unauthorized persons shall be excluded from places where demolition is in progress.

### 3. Precautionary Measures

#### 3.1 Excavations and Trenches

- 3.1.1 Before undertaking excavation work, drilling or otherwise disturbing the ground, the person doing the work, or causing such work to be done, shall contact all public utilities to determine the possible location of underground facilities, to avoid hazard to public safety, health and welfare caused by the inadvertent disruption of such facilities.
- 3.1.2 The sides of every excavation in connection with construction operations, including trenches for pipes or any other purpose, shall be sheet-piled, braced or shored when necessary to prevent the soil from caving in on persons engaged in work within the excavation.
- 3.1.3 Every trench, 1.50 meters or more in depth, shall be provided with suitable means of exit or escape at least every 7.50 meters of its length.
- 3.1.4 Where workers are employed adjacent to an excavation on work other than that directly connected with excavation, substantial railings or fences shall be provided to prevent such workers from falling into the excavation.

#### 3.2 Excavation and Fills

- 3.2.1 Excavation or fills for buildings or structures shall be so constructed or protected that they do not endanger life or property.
- 3.2.2 Cut slopes for permanent excavation shall not be steeper than 2 horizontal to 1 vertical and slopes for permanent fills shall not be steeper than 2 horizontal to 1 vertical unless substantiating data justifying steeper slopes are submitted. Deviation from the foregoing limitations for slopes shall be permitted only upon the presentation of a soil investigation report acceptable to the Building Official.

- 3.2.3 No fill or other surcharge loads shall be placed adjacent to any building or structure unless such building or structure is capable of withstanding the additional loads caused by the fill or surcharge.
- 3.2.4 Existing footings or foundations which may be affected by any excavation shall be underpinned adequately, or otherwise protected against settlement, and shall be protected against lateral movement.
- 3.2.5 Fills to be used to support the foundations of any building or structure shall be placed in accordance with accepted engineering practice. A soil investigation report and a report of satisfactory placement of fill, both acceptable to the Building Official shall be submitted.
- 3.2.6 Any person making or causing an excavation below grade immediately adjoining another property shall protect the excavation so that the soil of adjoining property will not cave-in or settle. Before commencing the excavation, the person making or causing the excavation to be made shall notify in writing the owners of adjoining buildings not less than 10 days before such excavation is to be made.

### 3.3 Storage of Materials

- 3.3.1 Materials to be stored at or near construction sites shall be piled or stacked in an orderly manner to avoid toppling over or being otherwise displaced. No materials shall be piled or stacked higher than 1.80 meters, except in yards or sheds intended especially for storage. When piles exceed 1.20 meters in height, the material shall be so arranged that the sides and ends of the piles taper back.
- 3.3.2 The placing of construction materials in a building/structure during construction operations shall be done with the consideration of the effect of such loads on the structural members and such loads shall, in general, be placed as near as possible to the points of support of the structural members. Such loading shall not cause stresses in any structural member beyond the design stresses.
- 3.3.3 Waste materials or rubbish resulting from construction operations shall be removed as rapidly as possible and shall not be allowed to accumulate on the premises or adjacent thereto.
- 3.3.4 Storage of combustible materials shall not be allowed in any part of a building under construction until fireproofing of that part of the building has been installed. Storage of combustible materials shall not be permitted under or near welding operations.
- 3.3.5 In every building reinforced concrete construction, forms of combustible materials shall be stripped from the concrete and removed from the building as soon as practicable. No part of the building shall be used for the storage of combustible materials until such forms have been removed in that part of the building.

- 3.3.6 Storage of materials on stairs or in stairways or adjacent to stair openings shall not be permitted.
- 3.3.7 Open fires for the purpose of disposing of waste materials, the heating of roofing or other materials or for any other purpose whatsoever shall not be allowed except with the permission of the Chief of the Local Fire Service.

In Fire Zones of Types I, II and III construction, only heaters with enclosed flames shall be used for the heating of any roofing or other similar materials.

Wherever any enclosed flame heaters or open fires are used, there shall be a workman in constant attendance, whose duty shall be to have such heater or fire under proper control at all times.

#### 3.4 Fire Protection

- 3.4.1 In all buildings in which standpipes are required, such standpipes shall be installed as the construction progresses in such a manner that they are always ready for Fire Department use, to the topmost constructed floor. Such standpipes shall be provided with a Fire Department connection on the outside of the building at the street level and with one (1) outlet at each floor.
- 3.4.2 In every construction operation, wherever a tool house, storeroom or other shanty is built or a room or space is used for storage, dressing room or workshop, at least one (1) approved handpump, tank or portable chemical or dry powder fire extinguisher shall be provided and maintained in an accessible location.
- 3.4.3 During construction operations, free access from the street to fire hydrants and to outside connections for standpipes, sprinkles or other fire extinguishing equipment, whether permanent or temporary shall be provided and maintained at all times. No material or construction equipment shall be placed within 3.00 meters of such hydrant or connection, nor between it and the center line of the street.

#### 3.5 Sanitation and first Aid

- 3.5.1 Adequate toilet facilities, maintained in a clean, sanitary condition, shall be provided at the construction/demolition site for the use of the workers.
- 3.5.2 An adequate supply of pure, cool drinking water shall be provided for workers during hours of work, and adequate sanitary washing facilities shall be provided for workers within reasonable access.
- 3.5.3 At every construction/demolition operation, arrangements shall be made for prompt medical attention in case of accident. An ample supply of first aid medicine (e.g. iodine, mercurchrome, absorbent cotton, aseptic gauze bandages) shall be provided and maintained in a clean sanitary cabinet, which shall be available at all times under the direction of the superintendent or a person designed by him.

Unless competent medical attention is quickly available, where more than 200 workers are employed, a properly equipped first-aid room shall be provided, and a physician or competent nurse shall be in constant attendance.

### 3.6 Temporary Light and Power

3.6.1 All parts of buildings/structures under construction/demolition, and all sheds, scaffolds, canopied walkways, work or storage areas, and equipment used in connection with such operations shall have sufficient light to insure safety and protection of life and property.

In passageways, stairways and corridors the average light intensity measured at floor level shall be not less than 2 foot candles.

3.6.2 At locations where tools and/or machinery are used, the average light intensity measured at floor level shall be not less than 5 candles.

Natural or artificial illumination shall be provided in such a manner that glare and shadows will not adversely affect the safety and protection of workers and property.

3.6.3 Temporary wiring for light, heat and/or power shall be adequately protected against mechanical or over-current failures. All conductive materials enclosing fixed or portable electric equipment, or forming a part of such equipment, shall be properly grounded.

3.6.4 Temporary electric service poles shall be self-supporting or adequately braced or guyed at all times.

### 3.7 Welding and Cutting

3.7.1 Gas welding and cutting and arc welding in construction/demolition operations shall be restricted to experienced workers acceptable to the NYMC. Suitable goggles or helmets and gloves shall be provided for and worn by workers engaged in gas welding or cutting or arc welding. Incombustible shields shall be provided to protect the worker when exposed to falling hot metal oxide.

3.7.2 Gas welding or cutting and arc welding shall not be done above other workers. When unavoidable, an incombustible shield shall be provided between the work and the workers below. A watchman shall be stationed to give warning at places where workers, in the course of their activity, are likely to pass under a gas welding or cutting or an arc welding operation.

3.7.3 Gas welding or cutting shall not be carried out in any place where ample ventilation is not provided, or from which quick escape is difficult. When unavoidable, workers engaged in such work in confined spaces shall be allowed

frequent access to fresh air. A relief worker shall be stationed close at hand to assist the worker in case of accident and to shut off the gases.

- 3.7.4 Tanks of fuel gas shall not be moved or allowed to stand for any extended period when not in use unless the caps of such tanks are in place.

Suitable cradles shall be used for lifting or lowering oxygen or fuel tanks, to reduce to a minimum the possibility of dropping tanks. Ordinary rope slings shall not be used.

- 3.7.5 Tanks supplying gases for welding or cutting shall be located at no greater distance from the work than is necessary for safety.

Such tanks shall be securely fastened in place and in an upright position.

They shall be stored or set in place for use so that they are not exposed to the direct rays of the sun or to high temperature.

- 3.7.6 Before steel beams or other structural shapes or elements of construction are cut by means of a gas flame they shall be secured by cables or chains to prevent dropping or swinging.

- 3.7.7 Where, in the course of demolition work, steel work or ironwork is being cut, released or dismantled, all necessary precaution shall be taken to prevent danger from sudden twist, spring or collapse.

### 3.8 Special Typhoon Precautions

- 3.8.1 Whenever a typhoon is expected to pass at or near the construction site, all construction materials or equipment shall be secured against displacement by wind forces. Construction shets, construction materials and equipment shall be secured by guying, shoring, or by tying down.

- 3.8.2 Where a full complement of personnel is employed or engaged for such protection purposes, normal construction activity or uses of materials or equipment may continue, allowing such reasonable time as may be necessary to secure such materials or equipment before winds of gale force are anticipated, in accordance with warnings or advisories issued by the PAGASA.

## 4. Equipment, Temporary Structures and Devices

### 4.1 Hoisting Machinery

- 4.1.1 In addition to the requirements of Sec. 4 of Rule X, every hoisting engine shall be provided with adequate brakes capable of holding the maximum load at any point of travel.

- 4.1.2 Hoisting machinery shall be enclosed to exclude unauthorized persons. If placed outside the building, further protection against falling objects shall be provided.

Guards shall be provided for exposed gears and other moving parts and around hoisting cables at all points to prevent workers from tripping or getting their clothing caught.

- 4.1.3 Ample room shall be provided around hoisting engines, motors or other machinery or apparatus to allow the free and safe movement of the operators.
- 4.1.4 When hoisting machinery is set on an elevated platform, such platform shall be of substantial and sturdy construction. Guard rails and toe boards shall be provided along all open sides of such platforms.
- 4.1.5 Electrical machinery and equipment to be used for construction work shall be installed and operated in accordance with the Philippine Electrical Code.
- 4.1.6 Steam boilers used in construction work shall be installed, equipped and maintained in accordance with the Philippine Mechanical Engineering Code.
- 4.1.7 A tag line or guide rope shall be used on all loads being hoisted or lowered.

#### 4.2 Platform Hoist.

- 4.2.1 Platform hoist for the handling of materials in buildings under construction shall have the car substantially constructed and provided with covers, either solid or wire mesh.  
Sections of the cover may be arranged to swing upward for the handling of bulky materials. If suitable overhead protection is provided the covers may be omitted.
- 4.2.2 Hoists shall be equipped with a broken-rope safety device.
- 4.2.3 Where wheelbarrows or buggies are used for handling material on platform hoists, cleats shall be nailed to the platform to fix the proper position so that handles shall not project beyond platform edges.
- 4.2.4 Supports for the overhead sheave of the hoist shall be designed to carry two times the weight of the hoist and its maximum load.

#### 4.3 Hoist Towers

- 4.3.1 Hoist towers erected in connection with construction work shall be substantially constructed. All members shall be so proportioned that the stresses shall not exceed those specified for the materials when carrying the dead load of the tower plus two times the weight of the platform or bucket or its maximum load.

- 4.3.2 Every hoist tower shall rest on a sufficiently solid foundation to prevent injurious settlement or distortion of its framework.
- 4.3.3 The base of every hoist tower shall be screened or otherwise protected on all sides to a height of not less than 1.80 meters.
- 4.3.4 Every hoist tower shall be secured in not less than four directions against swaying or tipping, at intervals of not more than 9.75 meters in its height, by steel cable guys adequately anchored or by other satisfactory means.

Such towers which are constructed adjacent to buildings shall be secured to the building frame at each floor as the construction progresses.

- 4.3.5 Hoist towers erected within the building, but not occupying the entire opening through which they pass, shall be completely enclosed on all sides and shall be provided with doors at the unloading points unless the platform hoist is solidly enclosed on all sides to the height to which material is to be loaded or unloaded.
- 4.3.6 Landing platforms in hoist towers or platform connecting hoist tower to a building or other structure shall be provided with guard rails and toe boards.

#### 4.4 Derricks and Cranes

- 4.4.1 Derricks shall be so designed and assembled that no part shall be stressed beyond the safe working stress for the material under its maximum rated load in any possible position. Such maximum load shall be conspicuously posted on each derrick.
- 4.4.2 The foot-block of every derrick shall be firmly secured against motion in any direction.
- 4.4.3 Guy derricks shall have the top of the mast held by not less than six (6) steel guy cables secured by firm anchorages and so placed that the angle of the guy with the mast shall be as large as possible.
- 4.4.4 The moving parts of derrick and cranes shall be kept well lubricated. All parts shall be inspected at least every other day.
- 4.4.5 Use and operation of cranes shall be in accordance with Section 3 of Rule X.
- 4.4.6 In the operation of cranes, and similar devices a standard signal system shall be used and all men assigned to the operation of such equipment shall be fully instructed on the signals.

#### 4.5 Cables, Ropes, Chains and Blocks

- 4.5.1 All ropes and cables used in connection with scaffolds, derricks and hoisting apparatus shall be tested before being put to use and at least once every 30 days

while in use, to insure their safety and suitability for the purpose. Any rope or cable found to be unsafe or unfit shall not be used.

- 4.5.2 Cables, ropes, chains and blocks shall be of such size that the maximum load supported by them will not exceed one sixth (1/6) of their breaking strength.

Blocks designed for use with abaca ropes shall not be used for steel cables.

Blocks used at or near floors or in other exposed places to change the direction of cables shall be enclosed or otherwise effectively guarded.

- 4.5.3 Chains shall not be used for slings, bridles or other similar purposes, but shall be restricted to only such purposes as require a straight pull.

- 4.5.4 Hooks shall not be used for hoisting buckets, cages or skips.

#### 4.6 Ladders and Temporary Stairway

- 4.6.1 Except where either permanent or temporary stairways or runways are required, ladders shall be provided to give access to all floor, stagings or platforms where work is being done more than five storeys above ground or above a permanent or temporary floor.

Ladders required by this Rule shall be of substantial construction. They shall be left in place until the permanent stairways are ready for use or until temporary stairways are installed. Stairways shall be erected as soon as the building exceeds 18.00 meters in height.

- 4.6.2 Ladders, other than sectional or extension ladders, shall not be extended by joining two or more together. No single ladder shall exceed 6.00 meters in length. When greater heights are to be reached, intermediate platforms shall be erected.

Ladder landings shall be at least 1.20 meters square and equipped with handrails and toe boards.

Ladder rungs shall be spaced uniformly and as near to 300 mm. as is practicable.

- 4.6.3 Ladders leading to floors, stagings or platforms shall extend at least 900 mm. above the level of such floors, stagings or platforms. 4.6.4 When used temporarily in place of stairways or runways, ladders serving traffic in both directions simultaneously shall be at least 1.00 meter wide. If separate ladders are provided for going up and coming down, they shall be marked "UP" and "DOWN" respectively at each floor and platform level.

- 4.6.5 All ladders, when in use, shall be set up in a manner to be secured and to prevent slipping.

Ladders, except stepladders or other self-supporting ladders, shall be securely fastened to a permanent support at the top, and if necessary, at the bottom, and braced to prevent swaying, bending or shaking.

4.6.6 Ladders shall not be placed or used in shafts of operative elevators or hoists except by workers engaged in the erection, construction, alteration or repair of any such shafts, hoistways or equipment.

4.6.7 Ladders shall not be painted, but may be oiled or treated with preservatives so as to permit the detection of faults.

Every ladder shall be inspected by the superintendent or foreman in charge before being put to use on a construction operation and thereafter at least once every 30 days while in continued use. Broken or weak ladders, or ladders with weak or missing rungs, shall not be used or permitted to remain on the construction site; but shall be repaired and made safe or destroyed.

4.6.8 Permanent stairways shall be installed in all buildings under construction as soon as conditions will permit.

When the work on a building has progressed to a height in excess of 18.00 meters and it has not been practicable to install the permanent stairways, at least one temporary stairway shall be provided for the full height and continued upward as rapidly as the work progresses.

4.6.9 Stairs and stairways shall be of sufficient strength to support a load of at least 490 kg./square meter. All stairways shall be guarded on all open sides with hand rails and toe boards.

4.6.10 Temporary stairs shall be constructed so that treads and risers are uniform in width and height in any one flight.

The sum of the height of the two risers and the width of one tread shall be not less than 160 millimeters nor more than 660 millimeters.

Temporary stairways shall be not less than 915 millimeters wide.

Landings shall be not less than 762 millimeters long. No flight of stairs of a temporary stairways shall have a vertical rise in excess of 3.60 meters. Whenever necessary intermediate landings shall be provided.

4.6.11 Temporary and permanent stairways shall be adequately lighted, as set forth in Section 3.5 of this Rule.

4.6.12 Permanent stairs that are to be used during construction and on which treads are to be filled in later shall have wooden treads firmly fitted in place for the full area of the tread.

The top surfaces of the temporary trads shall be maintained above the tops of the risers or nosings.

- 4.6.13 No door shall open directly onto a flight of stairs, but a landing equal to at least the width of the door shall be provided between the door and the stairs.

Temporary doors higher than 1.35 meters shall be fitted with wire glass panels.

#### 4.7 Runways and Ramps

- 4.7.1 Runways and ramps used in connection with scaffolds or extending from story to story or otherwise located and maintained for an extended period of time or for the transfer of bulky material shall be constructed of at least three 250 millimeter planks laid closely side by side and substantially supported and braced to prevent unequal deflection and springing action.
- 4.7.2 Runways and ramps shall have a slope not steeper than one in three. The total rise of a runway or ramp between landings shall not exceed 3.60 meters.
- 4.7.3 When the rise is steeper than one in six, or when the rise is more than 1.8 meters and steeper than one in eight, runways or ramps shall be provided with cleats spaced not more than 200 millimeters apart.
- 4.7.4 Runways and ramps having a total rise of more than 1.80 meters, or passing over or near floor openings, high tension wires or other dangerous places, shall be provided with guard rails and toe boards.

#### 4.8 Scaffolds

- 4.8.1 Properly constructed scaffolds shall be provided for all work which cannot be done safely by workmen standing on permanent or solid construction, except when such work can be done safely from ladders. All such scaffolds shall be substantially constructed to support at least four times the maximum load, and shall be secured to prevent swaying.
- 4.8.2 Planks used in the construction of stationary scaffolds shall be not less than 50 mm. nominal thickness. Where such planks overlap at the ends, the overlap shall be not less than 150 mm. Planks shall be so placed that they cannot tip under the weight of the worker at any point. Nails used in the construction of scaffolds shall be of ample size and length to carry the loads they are intended to support. All nails shall be driven full strength. No nails shall be subject to direct pull.
- 4.8.3 Ropes, cables and blocks used in the support of swinging scaffolds shall be of sufficient size and strength to sustain at least six times the maximum loads to which they will be subjected. Where acids are likely to come into contact with them, ropes shall not be used in support of scaffolds, but steel cables properly protected by grease or oil or other effective methods shall be used instead.

4.8.4 Every scaffold, the platform level of which is more than 1.80 meters above the ground, or above a permanent or temporary floor, other than iron workers' scaffolds and carpenters' bracket scaffolds, shall be provided with guard rails and two boards extending the full length of the scaffold and along the ends except where ramps or runways connect with them, unless otherwise enclosed or guarded. On suspended, swinging and pole scaffolds, the space between guard rails and two boards shall be fitted with wire mesh screens securely attached.

4.8.5 Where objects are likely to fall on a scaffold from above, a substantial overhead protection shall be provided; not more than 3.00 meters above the scaffold platform, and at doorways, passageways or other points where workers must pass under scaffolds, a substantial overhead protection shall be provided.

No materials or equipment other than required by the workers shall be placed on scaffold platforms.

4.8.6 Roof brackets, roof scantling, crawling boards and similar forms of supports shall be substantial in construction and securely fastened in place when in use.

4.8.7 Barrels, boxes or other similar unstable objects shall not be used as supports for planking intended as scaffolds or places of work.

4.8.4 When used over public sidewalks or other places of public use, scaffolds used for minor building repairs, alterations, or painting, shall be equipped with drop cloths to effectively prevent the filling of paint or debris.

4.8.9 Scaffolds used for sandblasting and gunitang operations shall be entirely and effectively enclosed, and the determination of effective enclosure shall be the complete absence of particles of materials of operation in the air at a horizontal distance of 15.00 meters from the point of operation.

#### 4.9. Temporary Flooring

4.9.1 In buildings of skeleton construction and permanent floor, except for necessary hoistway openings, shall, when possible, be constructed as the building progresses. There shall be not more than three un-filled floors above the highest permanent floor.

4.9.2 In building of skeleton construction the entire working floor shall be planked over, except spaces required for construction work, for raising or lowering materials, and for stairways or ladders. Planks shall be placed so that they cannot tip under the weight of a worker at any point and secured so that they cannot slip out of place.

4.9.3 In buildings of wood joist construction, the under-floor shall be laid for each floor as the building progresses.

#### 4.10 Floor Openings

- 4.10.1 All floor openings used as hoistways or elevator shaftways shall be protected on all sides, except the side being used for loading or unloading. Protection shall be in the form of barricades not less than 1.20 meters high along or near the edges of such openings, or guard rails not less than 91 mm. high, places not less than 600 mm. distant at all points from the edges of such openings. If guard rails are used, toe boards shall be provided along the edges of the openings. Sides left open for loading or unloading shall be guarded by similar solid doors or gates.
- 4.10.2 All floor openings used as stairways or for the accommodation of ladders or runways shall be guarded by railings and toe boards.
- 4.10.3 All other floor openings shall be protected on all sides by solid barriers not less than 910 mm. high, or by railings and toe boards, or shall be planked over or covered over by temporary construction capable of sustaining safely such loads as are likely to come thereon.
- 4.10.4 Barriers for the protection of openings used as hoistways or for elevators shall be constructed so that workers cannot thrust head, arms or legs through them, and loose materials cannot fall or be pushed into the shaftway.
- 4.10.5 Barriers guard rails around floor openings shall remain in place until permanent enclosed or protection are otherwise provided.

#### 4.11 Guard Rails and Tow Boards

- 4.11.1 Guard rails, when required under this Rule, shall have the top rail not less than 910 mm. high above the platform level. An intermediate rail shall be provided between the top rail and the platform. All guard rails shall have adequate supports not more than 2.40 meters apart.

Every guard rails shall be constructed to withstand a horizontal force of 30 kgs. per meter.

- 4.11.2 Toe boards, whenever required under this Rule, shall be solid to full height, and shall extend not less than 150 mm. above the platform level and shall be placed to fit close to the edges of the platform. They shall be adequately supported, secured and braced along the entire length to resist the impact of workers' feet and the shifting of materials.

Toe boards of wood shall be not less than 25 mm. nominal thickness, with supports not more than 1.20 meters apart.

Toe boards of metal shall be not less than 3.175 mm. thick, with supports not more than 1.20 meters apart.

## 5. Demolition

## 5.1 Precaution before demolition

- 5.1.1 Before commencing the work of demolition of a building/structure, all gas, electric, water and other meters shall be removed and the supply lines disconnected, except such as are especially provided or required for use in connection with the work of demolition.
- 5.1.2 All fittings attached to the building and connected to any street lighting system, electrical supply or other utilities shall be removed.
- 5.1.3 All electric power shall be shut off and all electric service lines shall be cut and disconnected by the power company at or outside the property line.
- 5.1.4 All gas, water and other utility service lines shall be shut off and cut or capped, or otherwise controlled at or outside the building line. In each case, as also in 5.1.3 above, the utility company involved shall be notified in advance and its approval or cooperation obtained.
- 5.1.5 No electric cable or other apparatus, other than those especially required for use in connection with the demolition work, shall remain electrically charged during demolition operations. When it is necessary to maintain any power, water, gas, or other utility lines during the process of demolition, such lines shall be temporarily relocated and protected with substantial covering to the satisfaction of the utility company concerned.
- 5.1.6 All necessary steps shall be taken to prevent danger to persons arising from fire or explosion from leakage or accumulation of gas or vapor; and from flooding from uncapped water mains, sewers and/or culverts.
- 5.1.7 All entrances/exits to and from the building shall be properly protected so as to prevent any danger to persons engaged in the demolition work using such entrances/exits in the performance of their work.
- 5.1.8 Glazed sashes and glazed doors shall be removed before the start of demolition operations.

## 5.2 Chutes

- 5.2.1 Chutes for the removal of materials and debris shall be provided in all parts of demolition operations which are more than 6.00 meters above the point from which material is to be removed. Chutes shall be so situated and constructed so as not to pose any danger to the public or to workmen.
- 5.2.2 Chutes shall be completely enclosed and shall be equipped, at intervals of 7.60 meters or less, with substantial stops to prevent descending materials from attaining dangerous speed. Proper tools shall be provided and kept available to loosen materials or debris jammed in the chute. No materials or debris shall be

dropped from any part of a building under demolition to any point outside the walls of the building except through properly enclosed wooden or metal chutes.

- 5.2.3 Chutes which are at an angle of more than 45° from the horizontal shall be completely enclosed on all four sides, except for openings at or about floor level at each floor, for the receiving of materials or debris.
- 5.2.4 Chutes at an angle of less than 45° with the horizontal may be left open on the upper side. However, where such a chute discharges into another chute steeper than 45° with the horizontal, the top of the steeper chute shall be covered at the junction point of the two chutes to prevent the spillage of materials or debris.
- 5.2.5 Openings into which materials or debris are dumped at the top of a chute shall be protected by a substantial guardrail extending at least 1.90 meters above the level of the floor.
- 5.2.6 At chute openings where materials or debris are dumped from wheelbarrows, a toe board or bumper not less than 150 mm. high and 50 mm. nominal thickness shall be provided.

Any space between the chute and edges of floor openings through which the chute passes shall be solidly planked over.

- 5.2.7 Chutes, as well as floors, stairways and other places, shall be effectively wet down at frequent intervals, whenever the dust from demolition operations would cause a menace or hardship to adjoining buildings or premises.
- 5.2.8 The bottom of each chute shall be equipped with an adjustable gate or stop for regulating the flow of materials.

Except when in actual use in the discharge of materials, the gate or the stop shall be kept closed. A reliable person shall be designated to control the gate and the backing up and loading of trucks. He shall see to it that no person is allowed to stand or pass under the discharge end of the chute at any time.

- 5.2.9 The area at the discharge end of each chute shall be completely enclosed with a substantial fence at all times or otherwise made inaccessible. A danger sign shall be placed at the discharge end of every chute.

### 5.3 Demolition of Walls and Chimneys

- 5.3.1 No wall, chimney or other construction shall be allowed to fall in mass, except under competent supervision.

Scaffolds or stagings shall be erected for workers if walls or other elements of the structure are too thin or too weak to work on. Heavy structural members, such as beams or columns, shall be carefully lowered and not allowed to fall freely.

- 5.3.2 Masonry walls or sections of masonry walls shall not be permitted to fall upon the floors of the building in such masses as to exceed the safe carrying capacity of the floors.
- 5.3.3 No walls or section of walls whose height is more than twenty-two (22) times its thickness shall be permitted to stand without lateral bracing unless such wall is in good condition and was originally designed to stand to a greater height without such lateral support.
- 5.3.4 Workmen shall not be permitted to work on top of a wall when weather conditions constitute a hazard.
- 5.3.5 Before demolishing any interior or exterior wall which is within 3.00 meters of any opening in the floor immediately below, such opening shall be substantially planked over unless all workmen are removed from all floors below and access to such floors is positively prevented.
- 5.3.6 At the completion of each day's work, all walls undemolished shall be left stable and in no danger of overturning or falling.
- 5.3.7 Foundation walls which serve as retaining support each and adjoining structures shall be demolished until such adjoining structures have been underpinned or braced, and earth either removed or supported by sheet piling or other suitable material.
- 5.3.8 In the demolition of brick and/or masonry chimneys which cannot safely be toppled or dropped, all materials shall be dropped down through the inside of such chimneys.
- 5.3.9 The loading point at the discharge end of any chute at or near the bottom of a chimney shall be completely protected by means of any overhead timber canopy constructed in accordance with Section 2.3 of this Rule.
- 5.3.10 To enable workman to reach or leave their work on any wall or scaffold, walkways shall be provided. Such walkways shall not be less than three (3) planks, properly tied or nailed to bearers of not less than 560 mm, in width, such that the planks do not deflect more than 50 mm. under normal loading.
- 5.3.11 In buildings of skeleton construction, the steel framing may be left in place during the demolition of masonry work. When this is done, all steel beams, girders and the like shall be cleared of all loose materials as the demolition progresses downward.

#### 5.4 Demolition of Floors

- 5.4.1 Before the demolition of floors and floor beams the floors and beams shall be completely supported by temporary planking and supports.

When the load is transferred to lower floors, these floors shall be carefully propped.

Demolition of loors shall not be started until the surrounding floor area to a distance of 6.00 meters have been entirely cleared of debris and other unnecessary materials.

5.4.2 No floor, roof or other part of a building that is being demolished shall be so overloaded with debris or materials as to render it unsafe.

5.4.3 Where workmen are engaged in the removal of loors, planks of ample strength which are supported idependently of the flooring shall be provided for the workmen to step on. The planks shall be so placed as to give the workmen a firm support in case the floor gives way or collapses unexpectedly. Where it is necessary for a workman to straddle a space between two planks, such space shall not exceed 400 millimeters. To enable workmen to reach any work place without the necessity of walking on exposed beams, planks shall be provided to serve as catwalks.

Stringers of ample strength shall be installed to support the planks where necessary. The ends of such stringers shall be supported by the floor beams or girders.

5.4.4 Planks used for temporary protection shall be sound, and at least 25 mm. thick. They shall be laid close together, with the ends overlapping by at least 100 mm. over solid bearings to prevent tipping under a load.

5.4.5 Where floors are being removed, no workmen shall be allowed to work in the area directly underneath. Such parts shall be barricaded to prevent access to it.

5.4.6 structural or load-supporting members on any floor shall not be cut or removed until all stories above the floor have been demolished and removed.

5.4.7 Where any floor has been removed, the entire tier of beams on which any device is supported shall be completely planked over, except for such openings as are required for the handling of material or equipment.

5.4.8 Tairs and stair railings shall be kept in place and in usable condition as long as it is practicable. Steps and landing shall be kept free from debris.

## **RULE XVI - LIGHT AND VENTILATION**

Pursuant to Sections 801 to 811 of the National Building code (PD 1096), the following rules and regulations shall be observed:

### 1. General Provisions:

- 1.1 Subject to the provisions of the Civil Code of the Philippines on Easements of Light and View, and to the provisions of Chapter 8 of the code, every building shall be designed, constructed, and equipped to provide adequate light and ventilation.
- 1.2 All buildings shall face a street or public alley or a private stree which has been duly approved.
- 1.3 No building shall be altered nor arranged so as to reduce the size of any room or the relative area of windows to less than that provided for buildings under this Tule, or to create an additional room, unless such additional room conform to the requirements of this Rule.
- 1.4 No building shall be enlarged so that the dimensions of the required court or yard would be less than that prescribed for such building.

2. Measurement and Percentage of Site Occupancy

2.1 The measurement of site occupancy or lot occupancy shall be taken at the ground level and shall be exclusive of courts, yards, and light wells. 2.2 Courts, yards, and light wells shall be measured clear of all projections from the walls enclosing such wells or yards with the exception of roof leaders, wall copings, sills, or steel fire escapes not exceeding 1.20 meters in width. 2.3 Maximum site occupancy shall be governed by use, type of construction, and height of the building and the use, area, nature and location of the site; and subject to the provisions of the local zoning requirements and in accordance with the following:

2.3.1 Types of Open Spaces:

- a) Public - Streets, alleys, easements of seashores, rivers, creeks, esteros, railroad tracks, etc., parks, plazas, playgrounds, etc.
- b) Private - Courts, yards, setbacks, lightwells, uncovered driveways, access roads and parking spaces.

**Table I - Private Open Space Requirements**

PERCENT OF OPEN SPACE		
TYPE OF LOT	A & B (Residential)	ALL OTHERS
a) Interior Lot (Lot located in the interior of a block made assessible from a public streetor alley by means of a private access road)	50%	25%
b) Inside Lot (Non-comer or single frontage lot)	20%	15%

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c) Corner and/or Through Lot	10%	5%
d) Lots bounded on three (3) or more sides by public open spaces such as streets, alleys, easement of seashores, rivers, esteros, etc.	5%	5%

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NOTE:

- 1) Refer to Section 3 of Rule III for occupancy grouping.
- 2) Group A buildings in R-1 Zones shall follow the minimum yard standards in Table II to comply with the open space requirements.

EXCEPTIONS: When the lots as described in (b), (c), and (d) in Table 1 are too shallow such that the public open space on which they abut can adequately supply light and ventilation to every room therein subject to the requirements on window opening, the requirement on private open space above may be waived, provided, however, that for lots abutting only one public open space, the depth shall be not more than 5.00 meters; and for those abutting two or more public open spaces, the depth shall be not more than 10.00 meters (See Fig. 3.2 to 3.4)

3) Sizes and Dimensions of Courts and Yards

Minimum sizes of courts and yards and their least dimensions shall be governed by the use, type of construction, and height of the building as provided hereunder, provided that the minimum horizontal dimension of said courts and yards shall be not less than 2.00 meters. All inner courts shall be connected to a street or yard, either by a passageway with a minimum width of 1.20 meters or by a door through a room or rooms.

3.1 Court - An unoccupied space between building lines and lot lines other than a yard: free, open and unobstructed from the ground upward.

- a) Inner Court - A court bounded on all sides or around its periphery by building lines.
- b) Open Court - A court bounded on three sides by building lines with one side bounded by another open space whether public or private.
- c) Through Court - A court bounded on two opposite sides by building lines with the other opposite sides bounded by other open spaces whether public or private.

Every court shall have a width of not less than 2.00 meters for one and two-story buildings. However, this may be reduced to not less than 1.50 meters in cluster living units such as quadruplexes, rowhouses and the like one or two stories in height with adjacent courts with an area not less than 3.00 square meters. Provided, further, that the separation walls or fences, if any, shall be not higher than 2.00 meters. Irregularly-shaped lots such as triangular lots and the like

whose courts may be also triangular in shape may be exempted from having a minimum width of 2.00 meters, provided that no side thereof shall be less than 3.00 meters and the area shall be not less than that required in Table 1. (See Figs. 2.1 to 2.3 and 3.1)

For buildings more than two (2) stories in height, the minimum width of the courts shall be increased at the rate of 300 millimeters (9.30m) for each additional story up to the fourteenth story. For buildings exceeding fourteen (14) stories in height, the required width of the court shall be computed on the basis of fourteen (14) stories. (See Tables III and IV and Fig. 4).

- 3.2 Yard - The vacant space left between the building and the property lines. Yards shall be subject to the same basic requirements as courts. In addition, the following rules shall be observed:
- a) Yards for Residential Buildings

**TABLE II**

Y A R D	Z O N E S		
	R - 1	R - 2	R - 3
Front	5.00 m.	*See abutments	
Side	2.00 m.	- do -	
Rear	2.00 m.	- do -	

Where:

- R-1 means Low-Density Residential Zone, characterized mainly by single-family, single detached dwellings with the usual community ancillary uses on a neighborhood scale, such as exclusive subdivisions and relatively exclusive residential communities which are not subdivisions.
- R-2 means Medium-Density Residential Zone, characterized mainly by medium-density housing like medium-rise, multiple family dwellings on a limited scale and the usual community ancillary uses on a barangay scale, such as semi-exclusive subdivisions and semi-exclusive residential communities which are not subdivisions.
- R-3 means High-Density Residential Zone, characterized by a very mixed housing type and high density housing, like high-rise buildings with more than usual community ancillary uses increasingly commercial in scale.

\* Abutments on the front, side and rear property lines may be allowed provided that the following requirements shall be complied with:

1. Open space as prescribed in Table I.
2. Window opening as prescribed in Section 7.

3. Firewall with a minimum of one-hour resistive rating constructed with a minimum height clearance of 1.00 meter above the roof (See Fig. 5).

The required open space shall be located totally or distributed anywhere within the lot in such a manner as to provide maximum light and ventilation into the building. (See Fig. 6).

- b) Yards for Commercial, Industrial, Institutional and Recreational Buildings.

**TABLE III**

ROAD RIGHT-OF-WAY	FRONT	SIDE	REAR
30 meters & above	10 m.	3 m.	3 m.
25-29 meters	8 m.	3 m.	3 m.
20-24 meters	6 m.	3 m.	3 m.
10-19 meters	4 m.	2 m.	2 m.
Below 10 meters	2 m.	2 m.	2 m.

The yard requirements in Table III above are for newly-developed thoroughfares. for highly built-up urban areas with duly established lines and grades reflecting therein proposed road widening and elevation, the requirements in Table III above may not be imposed and the building may abut on artificial ventilation, if any, and firewalls are complied with.

- 3.3 Setback - The vacant space left between the building and lot lines than 2.00 meters in width. A setback may be considered part of the open space, provided that it abuts a permanent public open space without any separation between them which obstructs the free flow of light and ventilation. Fences, if any, made of wrought or galvanized iron bars and the like with solid masonry zocalo, if any, not higher than 1.00 meter shall be allowed.

- 3.4 Uncovered Driveways, Access Roads and Parking Spaces may be considered part of the open space provided that they are open and unobstructed from the ground upward as in courts and yards.

4. Ceiling Heights:

- 4.1 Habitable rooms provided with artificial ventilation shall have ceiling heights not less than 2.40 meters measured from the floor to the ceiling; Provided that for buildings of more than one-storey, the minimum ceiling height of the first story shall be 2.70 meters and tht for the second story 2.40 meters and the succeeding stories shall have an unobstructed typical head-room clearance of not less than 2.10 meters above the finished floor. Above stated rooms with a natural ventilation shall have ceiling heights not less than 2.70 meters.

- 4.2 Mezzanine floors shall have a clear ceiling height not less than 1.80 meters above and below it.

5. Sizes and Dimensions of Rooms:

Minimum sizes of rooms and their least horizontal dimensions shall be as follows:

- 5.1 Rooms for Human Habitations - 6.00 square meters with a least dimension of 2.00 meters;
- 5.2 Kitchen - 3.00 square meters with a least of 1.50 meters;
- 5.3 Bath and toilet - 1.20 square meters with a least dimension of 0.90 meter.

6. Air Space Requirements in Determining Sizes of Rooms:

Minimum air space shall be provided as follows:

- 6.1 School Rooms - 3.00 cubic meters with 1.00 square meter of floor area per person;
- 6.2 Workshop, Factories, and Offices - 1.20 cubic meters of air space per person;
- 6.3 Habitable Rooms - 14.00 cubic meters of air space per person.

7. Window Openings:

- 7.1 Rooms intended for any use, not provided with artificial ventilation system, shall be provided with a window or windows with a total free area of openings equal to at least ten percent of the floor area of the room, provided that such opening shall be not less than one (1) square meter. However, toilet and bath rooms, laundry rooms and similar rooms shall be provided with window or windows with an area not less than one-twentieth of the floor area of such rooms, provided that such opening shall be not less than 240 sq. mm. Such window or windows shall open directly to a court, yard, public street or alley, or open water course.

Exception. Required windows may open into a roofed porch where the porch

- a) abuts a court, yard, public street or alley, or open water course and other public open spaces.
- b) has a ceiling height of not less than 2.70 meters.
- c) has one of the longer sides at least 65 percent open and unobstructed.

- 7.2 Eaves over required windows shall be not less than 750 millimeters from the side and rear property lines.

8. Vent Shafts:

- 8.1 Ventilation or vent shafts shall have a horizontal cross-sectional area of not less than 0.10 square meter for every meter of height of shaft but in no case shall the area be less than 1.00 square meter. No vent shall have its least dimension less than 600 millimeters.

- 8.2 Skylights - Unless open to the outer air at the top for its full area, vent shafts shall be covered by a skylight having a net free area or fixed louver openings equal to the maximum required shaft area.
- 8.3 Air ducts shall open to a street or court by a horizontal duct or intake at a point below the lowest window opening. Such duct or intake shall have a minimum unobstructed cross-sectional area of not less than 0.30 square meter with a minimum dimension of 300 millimeters. The openings to the duct of intake shall be not less than 300 millimeters above the bottom of the shaft and the street surface or level of court, at the respective ends of the duct or intake.

9. Ventilation Skylights:

Skylights shall have a gross not less than that required for the windows that are replaced. They shall be equipped with movable shashes or louvers with an aggregate net free area not less than that required for openable parts in the window that are replaced or provided with approved artificial ventilation of equivalent effectiveness.

10. Artificial Ventilation:

10.1 Rooms or spaces housing industrial or heating equipment shall be provided with artificial means of ventilation to prevent excessive accumulation of hot and/or polluted air.

10.2 Whenever artificial ventilation is required, the equipment shall be designed and constructed to meet the following minimum requirements in air changes:

USE OR OCCUPANCY	CUBIC METER		CEILING HEIGHT, METER				
	PER MINUTE PER PERSON MINIMUM	PER PERSON MAXIMUM	2.40	3.00	3.70	4.50	6.10
			AIR CHANGES PER HOUR				
Apartment	0.29	0.43	3	2	1-1/2	1	3/4
Banking Space	0.22	0.29	3	2	1-1/2	1	3/4
Barber Shop	0.22	0.29	3	2	1-1/2	1	3/4
Beauty Parlor	0.22	0.29	3	2	1-1/2	1	3/4
Broker's Board Room	0.57	0.85	8	6	4-1/2	3	2-1/2
Cafeteria	0.43	0.57	6	4-1/2	3-1/2	2-1/2	1-3/4
Cocktail bar	0.57	0.85	8	6	4-1/2	3	2-1/4
Churches	0.14	0.22	3	2	1-1/2	1	3/4
Department Stores	0.22	0.43	3	2	1-1/2	1	3/4
Director's Room	0.85	0.14	8	6	4-1/2	3	2-1/4
Drugstore (no counter)	0.22	0.29	3	2	1-1/2	1	3/4
Drugstore (w/counter)	0.29	0.43	5	3-3/4	3	2	1-1/2
Funeral Parloc	0.14	0.22	3	2	1-1/2	1	3/4

Gambling Rooms, Garage	0.57	0.85	6	6	4-1/2	3	2-1/4
Hospital Room, hotel room	0.29	0.43		3	2	1-1/2	1 3/4
Laboratories	0.43	0.57	6	4-1/2	3-1/2	2-1/2	1-3/4
Office	0.29	0.43	4	3	2-1/4	1-1/2	1
Restaurant, Kitchen	0.34	0.43	5	3-3/4	3	2	1-1/2
Shop, retail	0.22	0.29	3	2	1-1/2	1	3/4
Theaters	0.14	0.22					

10.3 For other rooms or spaces not specifically covered under this Section, applicable provisions of the Philippine Mechanical Engineering Code shall be followed.

11. Artificial Lighting:

Buildings/structures shall be designed and equipped to provide adequate lighting in accordance with the provisions of the Philippine Electrical Code and the Fire Code of the Philippines.

**RULE XVII - CONSTRUCTION OF BUILDINGS/STRUCTURES WITHIN APPROACH/DEPARTURE ZONES OF RUNWAYS OF AIRPORTS**

Pursuant to Section 105 of the National Building Code (PD 1096) and in accordance with the latest Civil Aeronautics Administration (CAA), now Bureau of Air Transportation (BAT), Air Regulations, the following rules and regulations shall govern the construction of buildings/structures within approach/departure zones of runways of airports.

1. **Definitions** - For purposes of this Rule, the following definitions shall apply:

**APPROACH/DEPARTURE ZONE OF AN AIRPORT** - That area with an inner edge located 60 meters from the end of the runways, perpendicular and symmetrical about the prolongation of the runway centerline, both sides of which have a divergence of 12.5% towards the outside, and with the inner edge as the short base of the isosceles trapezoid thus formed.

**INNER EDGE** - A line perpendicular to the prolongation of the runway centerline and 60 meters from the end of the runway. It is the short base of the isosceles trapezoid formed by the approach/departure zone, having a length as follows:

- a) 150 meters for runways less than 1,500 meters long;
- b) 300 meters for runways 1,500 meters long or more.

**TRANSITION SURFACE** - A specified surface sloping upwards and outwards from the edge of the approach/departure zone and from a line originating at the end of the inner edge, drawn parallel to the runway centerline, having a slope of 14.3% (1:7). The outer limit of the transition surface shall be determined by its intersection with the plane of the inner horizontal surface.

STRIP OF RUNWAY - That rectangular area determined by a line originating at the end of the inner edge drawn parallel to the centerline of the runway having a total length of  $L + 120$  meters, where L is the length of the runway in meters, and a width equal to the length of the inner edge.

2. No new building/structure shall be allowed within the strip of a runway.
3. The portion of the approach/departure zone where new construction is allowed is an isosceles trapezoid symmetrical about the prolongation of the runway centerline, the shorter base of which is the inner edge of the approach/departure zone. The height of buildings/structures within this zone shall be limited by an imaginary line with a slope of 2% for the first 3,000 meters from the inner edge reckoned from the surface of the runway, and thence 2.5% beyond 3,000 meters. The dimensions of the isosceles trapezoid are as shown on the table below:

Length of runway in meters	Inner edge (Short base) in meters	Distance between Long base in meters	bases in meters
1,500 or more	300	1,050	3,000
Less than 1,500	150	900	3,000

4. A height clearance certificate shall first be secured from the CAA (now BAT) before a building permit may be issued or the construction of buildings/structure located:
  - a) within 500 meters measured normal to the centerline of the runway of an airport, regardless of height;
  - b) from 500 meters up to 24.5 kilometers measured normal to the centerline of the runway of an airport and exceeding 45 meters in height above the elevation of the runway;
  - c) within the approach/departure zone of an airport at a distance of 2,250 meters measured from the inner edge, regardless of height;
  - d) within the approach/departure zone of an airport beyond 2,250 meters from the inner edge up to 15 kilometers and exceeding 45 meters in height above the elevation of the runway.

**RULE XVIII - MAXIMUM HEIGHT OF BUILDINGS/STRUCTURES**

Pursuant to Section 707 of the National Building code (PD 1096) the maximum height and number of stories of every building shall be dependent upon the character of occupancy and the type of construction considering population density, building bulk, widths of streets and car parking requirements in relation to other existing local land use plan and zoning regulations, geological, hydrological, meteorological, light and ventilation, as well as other environmental considerations, prevailing traffic conditions, the availability and capacity of public utility/service systems.

1. Definitions - For purposes of this Rule, the following definitions shall apply:

**HEIGHT OF BUILDINGS/STRUCTURE** - The vertical distance from the established grade elevation to the highest point of the coping of a flat roof, to the average height of the highest gable, pitch or hip roof, or to the top of the parapet, if the roof is provided with a parapet, whichever is higher (see Figs. 1-A, 1-B, 1-C).

**CHARACTER OF OCCUPANCY** - The classification of use or occupancy of buildings/structures or portions thereof.

**TYPE OF CONSTRUCTION** - The classification based on the fire resistivity ratings of materials and methods of construction of buildings/structures or portions thereof.

**GRADE (ADJACENT GROUND ELEVATION)** - The lowest point of elevation of the finished surface of the ground between the exterior wall of a building and a point 1.50 meters distant from said wall (See Fig. 2), or the lowest point of elevation of the finished surface of the ground between the exterior wall of a building and a property line, if it is less than 1.50 meters distant from said wall (see Fig. 3). In case walls are parallel to and within 1.50 meters of a public sidewalk, alley or other public way, the grade shall be the elevation of the sidewalk, alley or public way (See. Fig. 4).

**ESTABLISHED GRADE ELEVATION** - The point of reference on the highest adjoining sidewalk or the highest adjoining ground surface, as established by the proper government authority. However, in case of sloping ground, the average ground level of the buildables area shall be considered the established elevation, (See Fig. 5).

## 2. Determination of Height:

2.1 The height shall be measured from the highest adjoining public sidewalk or ground surface; Provided, that the height measured from the lowest adjoining surface shall not exceed such maximum height by more than 3.00 meters; Except, that towers, spires and steeples, erected as parts of the building and not used for habitation or storage are limited as to the height only by structural design, if completely of incombustible materials, or may extend not to exceed 6.00 meters above the height limits for each occupancy group, if of combustible materials. (See Figs. 1-A, 1-B, 1-C).

2.2 The height of any building/structure shall be subject to clearance requirements of the Civil Aeronautics Administration (CAA)/Military authorities in the case of airports, and of military authorities in the case of security-oriented facilities/installations.

2.3 Character of occupancy and type of construction:

Buildings/structures whose character of occupancy or use and occupant load are less hazardous as to life and fire risks may be built higher than those which are more hazardous.

Buildings/structures falling under Types IV or V (steel, iron, concrete or masonry construction) may be built higher than those falling under Types I or II (wooden construction).

2.4 In any given locality the height of buildings/structures shall be governed by the following factors:

2.4.1 Population density: Consider both the present and projected population density in the area.

2.4.2 Building bulk:

For a given volume of building/structure, that which has a lesser area of ground coverage may be built higher than that of greater area of ground coverage.

2.4.3 Widths of streets:

Provide for adequate light and ventilation and accessibility.

2.4.4 Traffic conditions and parking/loading requirements:

Provide effective control of traffic and adequate parking/loading facilities.

2.4.5 Provisions of land use plans and zoning ordinances.

2.4.6 Geological conditions:

Consider soil characteristics, location in relation to fault lines and earthquake belts and proximity to volcanoes.

2.4.7 Hydrological conditions:

Consider the water table at the site and distance to waterways and shorelines.

2.4.8 Meteorological conditions:

Consider the frequency and intensity of destructive typhoons, prevailing wind direction, relative humidity, amount of precipitation and the prevailing ambient.

2.4.9 Environmental conditions:

Provide effective control of air, noise and thermal pollution. Promote growth of vegetations. Optimize natural light and ventilation.

2.4.10 Availability and capacity of public utility/service systems:

Consider the availability and adequacy of electric power, potable and non-potable water supply, drainage and sewerage, transportation and communications facilities.

## **RULE XIX - PARKING AND LOADING SPACE REQUIREMENTS**

Pursuant to Section 803 of the National Building Code (PD 1096) providing for maximum site occupancy, the following provisions on parking and loading space requirements shall be observed:

1. The parking space rating listed below are minimum off-street requirements for specific specific uses/occupancies for buildings/structures:
  - 1.1 The size of an average automobile parking slot shall be computed at 2.4 meters by 5.00 meters for perpendicular or diagonal parking, at 2.00 meters by 6.00 meters for parallel parking. A truck or bus parking/loading slot shall be computed at a minimum of 3.60 meters by 12.00 meters. The parking slot shall be drawn to scale and the total number of which shall be indicated on the plans and specified whether or not parking accommodations, are attendant-managed. (See Section 2 for computation of parking requirements).
  - 1.2 Low-income single detached living units in housing project areas with individual lots not more than 100 square meters. - Pooled parking at 1 slot/10 living units
  - 1.3 Multi-family living units regardless of number of stories with an average living unit floor area of:
    - a) Up to 50 sq.m. - 1 slot/8 living units
    - b) Above 50 sq.m. to 100 sq.m. - 1 slot/8 living units
    - c) More than 100 sq.m. - 1 slot/living unit
  - 1.4 Hotels - 1 slot/10 rooms
  - 1.5 Residential hotels and apartels - 1 slot/5 units
  - 1.6 Motels - 1 slot/unit
  - 1.7 Neighborhood - 1 slot/100 sq.m. of shopping floor area
  - 1.8 Markets - 1 slot/150 sq.m. of shopping floor area
  - 1.9 Restaurants, fast-food centers, bars and beerhouses - 1 slot/30 sq.m. of customer area
  - 1.10 Nightclubs, supperclubs and theater-restaurants (See Section 1.20) - 1 slot/20 sq.m. of customer area
  - 1.11 Office buildings - 1 slot/125 sq.m. of gross floor area
  - 1.12 Pension/boarding/lodging houses - 1 slot/20 beds
  - 1.13 Other buildings in business/commercial zones - 1 slot/125 sq.m. of gross floor area

- 1.14 Public assembly buildings such as theaters, cinemas, auditoria, stadia, etc. - 1 slot/50 sq.m. of spectators area
- 1.15 Places of workship and funeral parlors - 1 slot/50 sq.m. of congregation area
- 1.16 Schools
  - 1.16.1 Elementary, secondary, vocational and trade schools -1 slot/10 classrooms
  - 1.16.2 Colleges and universities - 1 slot/5 classrooms
- 1.17 Hospitals - 1 slot/25 beds
- 1.18 Recreational facilities
  - 1.18.1 Bowling alleys - 1 slot/4 alleys
  - 1.18.2 Amusement centers - 1 slot/50 sq.m. of gross floor area
  - 1.18.3 Clubhouses, beach houses and the like - 1 slot/100 sq.m. of gross floor area
- 1.19 Factories, manufacturing establishments, mecantile buildings, warehouses and storage bins - 1 car slot/1,000 sq.m. of gross floor area
- 1.20 Tourist bus parking areas - 2 bus slots/hotel or theater restaurant

2. Parking Requirement Computation:

The off-street parking requirement rating may be reduced in accordance with any or all of the following applicable conditions, provided such conditions are permanent:

- 2.1 Only off-street service and loading bay requirements are to be provided if the area where the building/structure to be erected is designated as a pedestrian-dominated zone.
- 2.2 In mixed occupancies, the parking requirements shall be the sum of 100% of the dominant use and 50% of each of the non-dominant uses.
- 2.3 Fifty percent of all available on-street parking slots along roads fronting the property lines, whether police-controlled or meter-controlled, may be included in computing parking requirements of individual buildings/structures located thereat.
- 2.4 In areas where adequate public parking lots/multi-floor parking garages are available within 200 meters of the proposed buildings/structures, only 20% of parking requirements may be provided within the premises.

2.5 In computing for parking slots, a fraction of 0.5 and above shall be considered as 1 slot. In all cases however, a minimum of 1 parking slot shall be provided except in cases falling under Sections 1.2 and 1.3.

3. Special Provisions:

For buildings/structures intended for the use or occupancy of the handicapped, the following minimum provisions shall be observed:

3.1 1 accessible parking slot for the handicapped per 50 parking lots up to 150 slots and an additional slot for every 100 slots thereafter.

3.2 Wheel chair transfer area:

One between every two spaces.

Directly connects to accessible walks of travel and accessible building entrances (See Fig. 1).

3.3 Maximum distance of accessible parking area from facility served. Parking areas for the physically handicapped shall be within 60 m. of the facility being served. This shall be measured from the farthest space along accessible path to the closest accessible entrance. (See Fig. 2)

3.4 All accessible parking spaces for the handicapped shall have the international symbol of access (See Fig. 3). All signs are to be in white graphics on a dark blue background.

Size for exterior use shall be 30 cm. by 30 cm. or 60 cm. by 60 cm. Lettering for brief facility identification for the partially sighted shall be a minimum height of 5.0 cm.

4. Loading Slot Requirements:

4.1 Stores, manufacturing, wholesale or mercantile buildings/structures, or similar occupancies

- 1 loading slot for every 5,000 sq.m. of gross floor area with a minimum of 1

truck loading slot.

4.2 Hotels and hospitals

- 1 truck loading slot

**GUIDELINES IN THE DESIGN OF PUBLIC BUILDINGS/STRUCTURES**

Pursuant to Section 203 of the National Building Code (PD 1096) the following guidelines shall be observed in the design of public buildings/structures:

1. Public buildings/structures are permanent buildings/structures owned by the government, whether national or local, its agencies, including government-owned and/or controlled corporations.
2. Design of public buildings/structures aside from being logically functional and structurally sound, should promote, enhance and express the aesthetic quality, customs and traditions, socio-economic values and cultural heritage of the region towards evolving a distinct Filipino architecture.
  - 2.1 The architectural character of public buildings/structures should express the nature of their function, use or occupancy and should reflect their identity as public buildings/structures compatible with their total environment.
  - 2.2 Public buildings/structures should be designed for permanence.
  - 2.3 Use of indigenous and/or locally manufactured/produced materials, such as marble, stone, adobe, clay tiles, wood, coco wood, kapis shells should be maximized.
  - 2.4 Use of natural light and ventilation by means of proper orientation, cross ventilation, convection, sun control devices and the like should be maximized.
  - 2.5 Choice of finishes should aim to minimize maintenance costs.
  - 2.6 Decorative motifs and ornaments should evolve from native, ethnic or regional arts and be an inherent expression of the whole design.

These guidelines are not intended to limit the creativity of the designer nor preclude the use of advanced or innovative technology.

### **Excerpt from National Structural Code for Buildings**

#### **CHAPTER 1**

#### **GENERAL DESIGN REQUIREMENTS**

##### Section 1.01: Definitions

- (a) The following definitions give the meaning of certain terms as used in this Chapter:

**DEAD LOAD:** The dead load of a building shall include the weight of the walls, permanent partitions, framing floors, roofs and all other permanent stationary construction entering into and becoming a part a building. **LIVE LOAD:** the live load includes all loads except dead and lateral loads. **LATERAL LOAD:** The lateral load includes all horizontal loads due to seismic, wind forces and other loads in the same direction.

##### Section 1.02 Loads

(a) General. Buildings and all parts thereof shall be of sufficient strength to support the estimated or actual imposed dead and live loads in addition to their own proper dead load, without exceeding the stresses noted elsewhere in this Code, provided that no building or part thereof shall be designed for live loads less than those specified in this Chapter. Impact shall be considered in the design of any structure where impact loads occur.

(b) Special. Provisions shall be made in designing office floors for a load of 900 kilograms (2000 pounds) placed upon any space 75 centimeters (two and one-half feet) square wherever this load upon an otherwise unloaded floor would produce stresses greater than those caused by a uniformly distributed load of 250 kilograms per square meter (50 pounds per square foot).

(c) In designing floors to be used for industrial or commercial purposes, the actual live load caused by the use to which the building or part of the building is to be put shall be used in the design of such building or part thereof, and special provision shall be made for machine or apparatus loads when such machine or apparatus would cause a greater load than specified for such use in Section 1.04.

(d) Floors in office buildings and in other buildings, where partition locations are subject to change, shall be designed to support in addition to all other loads, a uniformly distributed load equal to 100 kilograms per square meter (20 pounds per square foot).

(e) Public garages and commercial or industrial buildings in which loaded trucks are placed, used or stored shall have the floor systems designed to support a concentrated rear wheel load of a loaded truck placed in any possible position.

(f) Garages for the storage of private pleasure cars shall have the floor system designed for a concentrated wheel load of not less than 900 kilograms (2000 pounds).

(g) Critical distribution of Live Loads. Where structural members are arranged so as to create continuity, the loading conditions which would cause maximum shear and bending moments along the member shall be investigated. Where uniform floor loads are involved, consideration may be limited to full dead load on all spans in combination with full live load on adjacent spans and on alternate spans.

(h) Where uniform roof loads are involved consideration may be limited to full dead load on all spans in combination with full live load on all spans and on alternate spans.

### Section 1.03 Method of Design

(a) Any system or method of construction to be used shall admit of a rational analysis in accordance with well-established principles of mechanics.

(b) All allowable stresses and soil-bearing values specified in this Code for working stress design may be increased one-third when considering wind or earthquake forces either acting alone or when combined with vertical loads. No increase will be allowed for vertical loads acting alone.

(c) Load factors for ultimate strength design of concrete and plastic design of steel shall be as indicated in the appropriate Chapters on the materials.

(d) Wind and earthquake loads need not be assumed to act simultaneously.

## Section 1.04 Unit Live Loads

(a) The unit loads set forth in Tables No. 1.04-A, 1.04-B, 1.04-C 7 1.05-A shall be taken as the minimum live loads per unit area of horizontal projection to be used in the design of buildings for the occupancies listed, and loads at least equal shall be assumed for uses not listed in this Section but which create or accommodate similar loadings.

### (A) FLOOR LOADS.

1. Uniformly Distributed Loads. These loads shall be the minimum average amount allowed on a floor and determined by the type of occupancy or use.

(a) Human Occupancy. See Table 1.04-A.

(b) Warehouse. See Table 1.04-B.

(c) Special Occupancy: Use loads in Table 1.04-C unless more accurate information is available.

2. Concentrated Loads. Design all floors to support either uniformly distributed loadings or the following concentrated loads (whichever develops the greater stresses). Unless otherwise specified, load concentration shall be assumed to occupy spaces 75 cms. x 75 cms. (2-1/2 x 2-1/2 ft.) and placed to develop maximum stresses in the affected members.

(a) Elevator machine room grating 135 kilograms (300 lbs.) on area of 25 sq.cm. (4 sq. in.).

(b) Finish light floor plate 90 kilograms (200 lbs.) on area of 6.5 sq. cm. ( 1 sq. in.).

(c) Floors other than those above 900 kilograms (2,000 lbs.).

(d) Scuttles, skylights and accessible ceilings 90 kilograms (200 lbs.).

### (B) STAIRS, SIDEWALKS, DRIVEWAYS, AND RAILINGS

1. Stairs. Apply either a uniformly distributed loading of 100 psf or concentrated loads of 135 kilograms (300 lbs.) spaced 90 cms. (3 ft.) center to center each occupying an area of 30 cms. (1 ft.) wide by the depth of the tread (whichever develops the greater stresses).

2. Sidewalks. Apply either a uniformly distributed loading of 1250 kgs. per square meter (250 pounds per square foot) or, when subject to trucking, a concentrated load of 3,600 kilograms (8,000 lbs.) on an area of 75 cm. x 75 cm. (2-1/2 ft. x 2-1/2 ft.) whichever develops the greater stresses.

3. Driveways. Apply either a uniformly distributed loading of 1250 kilograms per square meter (250 pounds per square foot) or the heaviest wheel load expected (minimum 5,400 kilograms (12,000 lbs.). Use whichever develops the greater stresses.

4. Railings. Design stairway, balcony railings and guardrails to resist a horizontal force of 65 kilograms per meter (100 lbs. per linear foot) applied normally at the top of the railing.

(b) All ceiling joists shall be designed for not less than 50 kilograms per square meter (10 pounds per square foot) total load.

**TABLE 1.04-A**

**LIVE LOAD REQUIREMENTS FOR HUMAN OCCUPANCY**

OCCUPANCY OR USE	LIVE LOAD	
	ksm	psf
Apartments (See Residential)		
Armories (not drill halls)		750      150
Assembly halls and other places of assembly		
Fixed seats	300	60
Movable seats	500	100
Balcony (exterior)	300	60
Bowling alleys, poolrooms, and similar recreational areas	375	75
Corridors:		
First Floor	500	100
Other floors, same as occupancy served as indicated and with minimum of		400      80
Courtrooms	400	80
Dance Halls	625	125
Dining Rooms and Restaurants		500      100
Dwellings (See Residential)		
Gymnasiums, Main Floors and Balconies		500      100
Hospitals:		
Corridors	400	80
Operating Rooms	300	60
Operating Theaters	625	125
Private Rooms	250	50
Wards	250	50
Hotels (see Residential)		
Libraries:	375	75
Reading Rooms	320 kcm	20 pcf.
Stock Rooms	with max. 750 ksm	150 psf
Lobbies, vestibules, and waiting rooms		500      100
Lounges	300	60
Marquees	375	75
Mess Halls	500	100
Office Buildings:		
Offices	250	50
Lobbies	500	100
Penal Institutions:		
Cell Blocks	375	75
Corridors	500	100
Residential		

Barracks	200	40		
Dormitories:				
Partitioned	200	40		
Non-partitioned	300	60		
Multi-family houses:				
Private Apartments	250	50		
Public Rooms	500	100		
Corridors	250	50		
Dwellings:				
First Floor	200	40		
Second Floor and Habitable Attic	150	30		
Uninhabitable attics 1.5 M. (5 ft.) or less	100	20		
Hotels:				
Guest Rooms	200	40		
Public Rooms	500	100		
Corridors Serving Public Rooms	500	100		
Public Corridors	500	100		
Private Corridors	400	80		
Recreation Rooms (not used for dancing)	500	100		
Schools:				
Classrooms	200	40		
Corridors	500	100		
Shower and Wash Rooms	300	60		
Skating Rinks	500	100		
Stairs, Fire Escapes and Exitways	500	100		
Theaters:				
Aisles, Corridors, and Lobbies	500	100		
Orchestra Floors-Fixed Seats	300	60		
Balconies-Fixed Seats	300	60		
Stage Floors	750	150		
Toilets	200	40		
Yards and Terraces, Pedestrians	500	100		

**TABLE 1.04-b**

**LIVE LOADS FOR STORAGE WAREHOUSE**

MATERIALS	Weight Per	Height	Weight Per		Live				
	Unit Volume		Unit Area	Load					
	kcm	pcf	m	ft	ksm	psf	ksm	psf	
<b>BUILDING MATERIALS</b>									
Asbestos	800	50	1.80	6	1500	300			
Bricks, Building	720	45	1.80	6	1350	270			
Bricks, Fire Clay	1200	75	1.80	6	2250	450			
Cement, Natural	945	59	1.80	6	1770	354	1500	300	
Cement, Portland	1150	72	1.80	6	2160	432	to	to	
	to	to	to	to					

	1680	105		3150	630				
Gypsum	800	50	1.80	6	1500	300	2000	400	
Lime and Plaster	850		53	1.50	5	1325	265		
Tiles	800	50	1.80	6	1500	300			
Woods, bulk	720		45	1.80	6	1350	270		
DRUGS, PAINTS, OIL,									
Alum, Pearl, in barrels	530		33	1.80	6	990	198		
Bleaching Powder									
in hogsheads	500	31	1.05	3-1/2	510	102			
Blue, Vitril, in barrels	720		45	1.05	5	1130	226		
Glycerine, in cases	830		52	1.80	6	1560	312		
Linseed Oil, in barrels	575		36	1.80	6	1080	216		
Linseed Oil, in iron drums	720		45	1.20	4	900	180		
Logwood Extract,									
in boxes	1120	70	1.50	5	1750	350			
Resin, in barrels	770		48	1.80	6	1440	288		
Shellac, Gum	610		88	1.80	6	1440	228	1000	200
to	to								
					1500	300			
Soaps	800	50	1.80	6	1500	300			
Soda Ash, in hogsheads	1000		62	0.83	2-3/4	835	167		
Soda, Caustic, in iron	1410		88	1.02	3-3/8	1470	294		
Soda, Silicate in barrels	850		53	1.80	6	1590	318		
Sulphuric Acid	960		60	0.49	500	100			
Toilet Articles	560		35	1.80	6	1650	330		
White Lead, Paste,									
in cans	2790	174	1.05	3-1/2	3050	610			
White Lead, Dry	1380		80	1.43	4-3/4	2040	408		
Red Lead and									
Litharge, Dry	2115		132	1.13	3-3/4	2475	495		
DRY GOODS, COTTON,									
WOOL, ETC.									
Burlap, in bales	690		43	1.80	6	1290	258		
Carpets and Rugs	480		30	1.80	6	900	180		
Coir, Yarn, in bales	530		33	2.40	8	1320	264		
Cotton, in Bales, American	480		30	2.40	8	1200	240		
Cotton Bleached Seeds									
in cases	450	28	2.40	8	1120	224			
Cotton in bales, Foreign	640		40	2.40	8	1600	320		
Cotton Flannel,									
in cases	190	12	2.40	8	80	96			
Cotton Sheeting, in cases	370		23	2.40	8	920	184		
Cotton Yarn, in cases	400		24	2.40	8	1000	200		
Excelsior, compressed	300		19	2.40	8	760	152	1000	200
Hemp, Italian,									
Compressed	350		22	2.40	8	880	176	300	
Hemp, Manila,									
Compressed	480		30	2.40	8	1200	240	250	

Jute, Compressed	660	41	2.40	8	1643	320	1000	200
					to	to		
					1250	250		
Linen Damask, in cases	800	50	1.50	5	1250	250		
Linen Goods, in cases	480	30	2.40	8	1200	240		
Linen, Towels, in cases	640	40	1.80	6	1200	240		
Silk and Silk Goods	720	45	2.40	8	1800	360		
Sisal, Compressed	336	21	2.40	8	840	168		
Tow, Compressed	465	29	2.40	8	1160	232		

Wool, in bales,  
Compressed 770 48

Wool, in bales, not  
Compressed  
Wool, Worsteds, in cases

#### GROCERIES, WINES, LIQUORS, ETC.

Beans, in bags  
Beverages  
Canned Goods, in  
Cases  
Cereals  
Cocoa  
Coffee, Green,  
in bags  
Dates in cases  
Figs, in cases  
Flour, in barrels  
Fruits, fresh  
Meat and Meat  
Products  
Milk, condensed  
Molasses, in barrels  
Rice, in bags  
Sal Soda, in barrels  
Soap powder, in bases  
Starch, in barrels  
Sugar, in barrel  
Sugar, in cases  
Tea, in chests  
Wines and Liquors,  
in barrels

#### HARDWARE, ETC.

Automobile Parts  
Chain  
Cutley  
Door Checks  
Electrical Goods and  
Machinery  
Hinges

Locks, in cases, packed  
 Machinery, Lights  
 Plumbing Fixtures  
 Plumbing Supplies  
 Sash Fasteners  
 Screws  
 Shafting Steel  
 Sheet Tin, in boxes  
 Tools, small metal

Wire, Cable, on reels  
 Wire, Insulated copper  
     in coils  
 Wire, Galvanized Iron  
     in coils  
 Wire, Magnet, on spools

**MISCELLANEOUS:**

Automobile Tires  
 Automobile, uncrated  
 Books (solidly packed)  
 Furniture  
 Glass and Chinaware  
     in crates  
 Hides and Leather  
     in bites  
 Hides, Buffalo,  
     in bundles  
 Leather and Leather  
     Goods  
 Newspaper, Paper and  
     strawboards  
 Paper, Writing and  
     Calendared  
 Rope, in coils  
 Rubber, Crude  
 Tobacco, bales

**TALBE 1.04-C**

**LIVE LOADS FOR SPECIAL OCCUPANCY**

M A T E R I A L	ksm	psf
Apparatus Room	375	75
Bag Storage	625	125
Bakeries:		
General Area	500	100

Storage Area	1000	200	
Barber Shop	375	75	
Battery-Charging Rooms	1000	200	
Boiler Houses	1000	200	
Cafeteria (mess area)	500	100	
Cat Washrooms	375	75	
Canteens:			
General Area	500	100	
Storage Area	1000	200	
Catwalks	250	50	
Cobbler Shop	500	100	
Data Processing (clerical)	750	150	
Dayrooms	300	60	
Drawing Reproduction Room (blueprinting)		500	100
Dressing Rooms (Theaters)	375	75	
Drill Halls	625	125	
Drum Filling	750	150	
Drum Washing	375	75	
File Rooms:			
Correspondence	750	150	
Drawings	1000	200	
Fire Escapes	500	100	
Galleys:			
Dishwashing Rooms (mech.)	1500	300	
General Area	375	75	
Provision Storage (not refrigerated)	1000	200	
Preparation Rooms:			
Meat	1250	250	
Vegetable	500	100	
Garages (including fire station):			
Passenger Cars 3000 kilograms (6000 lbs.)			
Repair Areas	500	100	
Trucks and Buses over 9000 kilograms (2000 lbs.)	1000	200	
Trucks and Buses 9000 kilograms (2000 lbs.)	750	150	
Garbage Storage Rooms	625	125	
Generator Rooms	1000	200	
Grandstands	625	125	
Guard House			
Hangars:			
Landplane and seaplane			
Lighter-than-air			
Incinerators, charging floor			
Laboratories (normal equipment)			
Latrines			
Laundries			
Linen Storage			
Loading Platforms (except where floor load is less)			

Locker Rooms  
Medical Facilities, mechanical equipment rooms  
Morgues  
Porches:  
    Barracks, hospitals and mess halls  
    Others  
Post Exchanges  
Post Offices:  
    General Area  
    Work Rooms  
Power Plants  
Projection Booths  
Pump Houses  
Receiving Rooms (radio) including roof areas  
    supporting antennas and electronic equipment  
Recreation Rooms (not used for dancing)  
Refrigeration Storage Rooms:  
    Dairy  
    Meat  
    Vegetable  
Rest Rooms  
Rubbish Storage Rooms  
Scrub Decks  
Shops:  
    Aircraft Utility  
    Assembly and Repair  
  
    Blacksmith  
    Bombsight  
    Carpenter  
    Drum Repair  
    Electrical  
    Engine Overhaul  
    Heavy Materials assembly  
Light Materials assembly  
Machine  
Mold Loft  
Plate (except storage areas)  
Public Works:  
    First Floor  
    Sheet Metal  
    Ship fitters  
    Structural  
    Upper Floors  
Stadiums  
Storage and Supply Rooms  
Storehouses:  
    Aircraft

Ammunition (one story)  
Cold Storage:  
    First Floor  
    Upper Floor  
Dry Provisions  
Fuse and Detonator ( 1 story)  
General:  
    First Floor

Second Floor  
Third Floor  
Above Third Floor

**TABLE 1.04-C**

**LIVE LOADS FOR SPECIAL OCCUPANCY**

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M A T E R I A L

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Section 1.05: Roof Loads

(a) General. Roof shall sustain, within stress limitations of this code all "dead loads" plus unit "live loads" as set forth in Table No. 1.05-A. The live loads shall be assumed to act vertically upon the area projected upon a horizontal plane.

(b) Unbalanced Loading. Unbalanced loads shall be used where such loading will result in larger members of connections. Trusses and arches shall be designed to resist stresses caused by unit live loads on one-half of the span if such loading results in reverse stresses, or stresses greater in any portion than the streamer produced by the required unit live load upon the entire span. For roofs whose structure is composed of a stressed shell, framed or solid, wherein stresses caused by any point loading are distributed throughout the area of the shell, the requirements for unbalanced unit live load design may be reduced 50 per cent.

(c) Special-purpose roofs. Roofs to be used for special purposes shall be designed for appropriate loads as approved by the Building Official.

Greenhouses, lath houses, residential patio structures and agricultural building shall be designed for a vertical live load of not less than 50 kilograms per square meter (10 pounds per square foot).

(d) Water Accumulation. All roofs shall be designed with sufficient slope or camber to assure adequate drainage after the long-time deflection from dead load or shall be designed to support

maximum loads including possible ponding of water due to deflection. See Section 1.07 for deflection criteria.

**TABLE NO. 1.05-A**  
**MAXIMUM ROOF LIVE LOADS**

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TRIBUTARY LOADED AREA FOR ANY STRUCTURAL MEMBER

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Section 1.06: Reduction of Live Loads

The following reductions in unit live loads as set forth in Tables 1.04-A, 1.04-B and 1.04-C for floors, shall be permitted in the design of columns, piers, walls, foundations, trusses, beams, and flat slabs.

Except for places of public assembly, and except for live loads greater than 500 kilograms per square meter (100 pounds per square foot) the design live load on any member supporting fourteen square meters (one hundred and fifty square feet) or more may be reduced at the rate of 0.40% per square meter (0.08% per square foot) of area supported by the member. The reduction shall not exceed 60 percent nor "R" as determined by the following formula:

$$R = \frac{23.1 (1 + \frac{D}{L})}{L} \times 100 \quad \text{or} \quad R = \frac{(\frac{D + L}{4.33}) \times 100}{L} \frac{D}{L}$$

Where:

R = Reduction in percent

D = Dead Load per unit area supported by the member.

L = Live Load per unit area supported by the member.

For storage live loads exceeding 500 kilograms per square meter (100 pounds per square foot), no reduction shall be made except that design live loads on columns may be reduced 20 percent.

This live load reduction shall not exceed 40 per cent in garage for the storage of private pleasure cars having a capacity of not more than nine passengers per vehicle.

Section 1.07: Deflection

The deflection of any structural member shall not exceed the values set forth in Table No. 1.07-A, based upon the factors set forth in Table No. 1.07-B. The deflection criteria representing the most restrictive condition shall apply. Deflection criteria for materials not specified shall be developed in a manner consistent with the provisions of this Section. See Section 1.05 (d) for camber requirements.

**TABLE 1.07 - A**  
**MAXIMUM ALLOWABLE DEFLECTION**  
**FOR STRUCTURAL MEMBERS <sup>1</sup>**

MEMBER LOADED	MEMBER LOADED
TYPE OF MEMBER	WITH L.L. ONLY      WITH L.L. + D.L.
Roof Member Supporting Plaster or Floor Member	L/360                      L/240

<sup>1</sup> Sufficient slope or camber shall be provided for flat roofs in accordance with Section 1.05 (d).

L.L. = Live Load

D.L. = Dead Load

K = Factor as determined by Table No. 1.05-A

L = Length of member in same units as deflection

Section 1.08: Live Loads Posted

The live loads for which each floor or part thereof of a commercial or industrial building is or has been designed shall have such designed live loads conspicuously posted by the owner in that part of each storey in which they apply, using durable metal signs, and it shall be unlawful to remove or deface such notices. The occupant of the building shall be responsible for keeping the actual load below the allowable limits.

Section 1.09: Retaining Walls

Retaining walls shall be designed to resist the lateral pressure in accordance with accepted engineering practice. Walls retaining drained earth may be designed for pressure equivalent to that exerted by a fluid weighing not less than 30 pounds per cubic foot and having a depth equal to that of the retained earth. Any surcharge shall be in addition to the equivalent fluid pressure.

Section 1.11: Walls and Structural Framing

(a) General. Walls and structural framing shall be erected true and plumb in accordance with the design. Bracing shall be placed during rection wherever necessary to take care of all loads to which the structure may be subjected.

**TABLE 1.11 - A****SHAPE FACTORS FOR RADIO TOWERS  
AND TRUSSED TOWERS**

TYPE OF EXPOSURE	FACTOR
Wind normal to one face of tower	
Four-cornered, flat or angular section, steel or wood	2.20
Three-cornered, flat or angular section, steel or wood	2.20
Wind on corner, Four-cornered tower, flat or angular sections	2.40
Wind parallel to one face of three-cornered tower, flat or angular sections	1.50
Factors for towers with cylindrical elements are approximately two-thirds of those for similar towers with flat or angular sections	
Wind on individual members	
Cylindrical members	
Two inches or less in diameter	1.00
Over two inches in diameter	0.80
Flat or angular sections	1.30

(b) Interior Walls. Interior walls, permanent partitions, and temporary partitions which exceed three-fourth of the height of the room in which they are placed shall be designed to resist all loads to which they are subjected but not less than a force of 10 pounds per square foot applied perpendicular to the walls. The deflection of such walls under a load of five pounds per square foot shall not exceed 1/240 of the span for walls with little finishes and 1/120 of the span for walls with flexible finishes. See Table No. 1.07-A for earthquake design requirements where such requirements are more restrictive.

#### Section 1.12: Anchorage

Concrete or masonry walls shall be anchored to all floors and roofs which provide lateral support for the wall or are required to provide stability for the wall. Such anchorage shall be capable of resisting the horizontal forces specified in this Chapter or a minimum force of 200 pounds per linear foot of wall, whichever is the larger. Required anchor in masonry walls of hollow units or cavity walls shall enter a reinforced grouted structural element of the wall.

#### Section 1.13: Heliport and Helistop Landing Areas

In addition to other design requirements of this Chapter, heliport and helistop landing or touchdown areas shall be designed for the maximum stress induced by the following:

1. Dead load plus actual weight of the helicopter.
2. Dead load plus a single concentrated impact load covering one square foot (1 sq. ft.) of .75 times the fully loaded weight of the helicopter if it is equipped with hydraulic type shock absorbers, or 1.5 times the fully loaded weight of the helicopter if it is equipped with a rigid or skid type landing gear.
3. The dead load plus a uniform live load of 100 pounds per square foot. The required live load may be reduced in accordance with the formula in Section 1.06.

## **CHAPTER 2**

### **LATERAL FORCES**

#### Section 2.01: Earthquake Forces

(a) General. These lateral force requirements are intended to provide minimum standards as design criteria toward making buildings and other structures earthquake resistant. The provisions of this Section apply to the structures as a unit and also to all parts thereof, including the structural frame or walls, floor and roof systems, and other structural features.

The provisions incorporated in this Section are general and, in specific cases, may be interpreted as to detail in order that the intent shall be fulfilled.

Every building or structure and every portion thereof, except Types I and II buildings of Group A occupancy which are less than 7.5 meters (25 feet) in height, and minor accessory buildings, shall be designed and constructed to resist stresses produced by lateral forces as provided in this Section. Stresses shall be calculated as the effect of a force applied horizontally at each floor or roof level above the foundation. The force shall be assumed to come from any horizontal direction.

#### (d) Minimum Earthquake Forces for Structure

1. Total lateral force and distribution of lateral forces. Every structure shall be designed and constructed to withstand minimum lateral seismic forces assumed to act non-currently in the direction of each of the main axes of the structure in accordance with the following formula:

The value of K shall be not less than that exhibited in Table 2.01-A. The value of C shall be determined to accordance with the following formula:

#### **TABLE 2.01 - A**

#### **HORIZONTAL FORCE FACTOR K FOR BUILDINGS OR OTHER STRUCTURES <sup>1</sup>**

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TYPE OR ARRANGEMENT OF RESISTING ELEMENTS	VALUE OF $K^2$
All building framing systems except as hereinafter classified.	1.00
Buildings with a box system as defined in Section 2.01 (b)	1.33
Buildings with a dual bracing system consisting of a ductile moment resisting force in accordance with their relative rigidities considering with the following criteria:	
1. The frames and shear walls shall resist the total lateral force in accordance with their relative rigidities considering the interaction of the shear walls and frames.	0.80
2. The shear walls acting independently of the ductile moment resisting frames shall resist the total required lateral force.	
3. The ductile moment resisting space frame shall have the capacity to resist not less than 25 per cent of the required lateral force.	
Buildings with a ductile moment resisting space frame designed in accordance with the following criteria. The ductile moment resisting space frames shall have the capacity to resist the total required lateral force.	0.67
Elevated tanks plus full contents, on four or more cross-braced legs and not supported by a building, <sup>3, 4, 5.</sup>	3.00
Structures other than buildings and other than those set forth in Table 2.01-B.	2.00

<sup>1</sup> Where prescribed wind loads produce higher stresses, these loads shall be used in lieu of the loads resulting from earthquake forces.

<sup>2</sup> The coefficient may be modified by the Building Official upon advice of seismologists and structural engineers specializing in seismic design.

<sup>3</sup> The minimum values of KC shall be 0.12 and the maximum value of KC need not exceed 0.25.

<sup>4</sup> For overturning, the factor J as set forth in Section 2.01 (h) shall be 1.00.

<sup>5</sup> The torsional requirements of Section 2.01 (g) shall apply.

**TABLE 2.01 - B**

**HORIZONTAL FACTOR  $C_p$  FOR PARTS OR PORTIONS  
OF BUILDINGS OR OTHER STRUCTURES**

PART OR PORTION OF BUILDINGS of Force	Direction	Value of $C_p$
Exterior bearing and non-bearing walls, interior bearing walls and partitions interior non-bearing walls and partitions over 3 meters (10 feet) in height, masonry fences over 1.80 meters (6 feet) in height	Normal to flat surface	0.20
Cantilever parapet and other cantilever walls, except retaining walls	Normal to flat surface	1.00
Exterior and interior ornamentations and appendages	Any direction	1.00
When connected to, part of, or housed within a building; towers, tanks, towers and tanks plus contents, storage racks over 6 feet in height plus contents, chimneys, smoke stacks and penthouses	Any direction	0.20
When resisting on the ground; tank plus effective mass of its contents	Any direction	0.10
Suspended ceiling forming 3 (applies to Seismic Zones 2 and 3 only)	Any direction	0.20
Floors and roofs acting as diaphragms <sup>2</sup>	Any direction	0.10
Connections for exterior panels or elements complying with Section 2.01 "K" - 5	Any direction	2.00

**Section 2.05: Earthquake Recording Instrumentation**

(1) General. Every building over six stories in height with an aggregate floor area of 6,000 square meters (60,000 square feet) or more, and every building over 10 stories in height regardless of floor area, shall be provided with not less than three approved recording accelerographs.

(2) Location. The instruments shall be located in the basement, midportion, and near the top of the building. Each instrument shall be located in an accessible position.

(3) Maintenance. Maintenance and service of the instruments shall be provided by the owner of the building subject to the approval of the Building Official. Data produced by the instruments shall be made available to the Building Official upon his request.

## Section 2.06: Wind Pressure

(a) General. Buildings or structures shall be designed to withstand the minimum horizontal and uplift pressure set forth in Fig. 2.06-B to G and this Section allowing for wind from any direction. the wind pressure set forth in Figs. 2.06-B to G are minimum values and shall be adjusted by the Building Officials for areas subject to higher wind pressures. When the form factor, as determined by the wind tunnel tests or other recognized methods indicates vertical or horizontal loads of lesser or greater severity than those produced by the loads herein specified, the structure may be designed accordingly.

## Section 3.04: Allowable Unit Stresses

(a) Allowable Uni Stress on Plans. Where structures are designed for use of stress grade lumber, structural glued-laminated, for plywood used structurally, the allowable unit stresses for the species and the grade shall be shown on the plans filed with the Building Department.

### (b) Stresses.

#### 1. General

Except as hereinafter provided, stresses shall not exceed the allowable unit stresses in pounds per square inch for the respective species and grade in Table 3.04 (b). Grading for wood shall be as per Table 3.04 (A).

For modification of allowable unit stresses for structural glued-laminated lumber, see also Table 3.04 (C). When the wide face of the lamination is parallel to the direction of the load and the beam is composed of not less than three laminations, 115 per cent of the bending stresses as set forth in Table No. 3.04 (B) shall apply. The allowable unit stresses as set forth in Table 3.04 (B) apply to lumber, to structural glued-laminated lumber and to exterior type plywood that have been pressure impregnated by an approved preservative.

Studs, joists, rafters, foundation plates or sills, planking 5 cm. (2 inches) or more than in depth, beams, stingers, posts, structural sheathing and similar load bearing members shall be of grades set forth in Table No. 3.04 (C) in the species specifically approved by the Building Official.

2. Stresses in poles or piles used as Structural Members. Induced stresses in pounds per square inch for normal loading of round poles or piles when used as structural members, except modulus of elasticity which shall be the same as for sawn lumber, shall not exceed 60 percent of the basic unit working stresses for the species as set forth in Table No. 3.04 (B) and the pieces shall meet the requirement of N.S.E.C. Standard No. 25-13-67 for poles or N.S.E.C. Standard No. 25-14-67 for piles.

### **TABLE 3.04 (A)**

### **LIMIT OF DEFECTS BY GRADE IN JOISTS AND PLANKS**

KIND OF DEFECTS	Stress Grade		Stress Grade		Stress Grade	
	80%	67%	56%			
<b>A. NATURAL DEFECTS</b>						
1. Worm holes, average diameter (maximum allowable size in inches)						
a. Individual	Not permitted		1/15		1/4	
b. Quantity limitation	Not permitted		Not clustered		Not clustered	
2. Slope of Grain (Maximum variation in inches from longitudinal axis per 12 inches within middle half of length)						
	3/4	1		1-1/4		
3. Checks and shakes						
a. Size of each check and shake, or if in combination, the sum of the sizes of all checks and shakes within middle half of depth of the piece shall not exceed:						
	1/4	1/4	3/8			
	of thickness	of thickness	of thickness		of thickness	
b. End penetration: Checks splits at the middle half of the depth of the piece shall not extend a distance greater than:						
	1/4	1/4	3/8			
	of thickness	of thickness	of thickness		of thickness	
Knots (Maximum allowable size of individual knot in inches)*						
Nominal width of face, in inches	wide	Narrow face on edge of	Along center line of	Narrow face on edge of	Along center line of	Narrow face on edge of
	face	face	face	face	face	face
	within	face	face	face	face	face
	the	the	the			
	third of	third of	third of	third of		
	of piece	length of piece	length of piece	length of piece		length

**TABLE 3.04 (A)**

**LIMIT OF DEFECTS BY GRADE IN JOISTS AND PLANKS**

KIND OF DEFECTS	Stress Grade		Stress Grade		Stress Grade	
	80%		67%		56%	
2	1/4	1/4	1 1/4	3/4		
3	1/2	3/4	3/4	1 1/2	1	
4	3/4	1	1	2	1 1/2	1 1/2
5	1	1 1/4	1 1/4	2 1/2	2	2
6	1 1/4	1 1/2	1 3/4	3 1/4	2 1/2	2 1/2
8	1-3/8	2	2	3 3/4	2 3/4	3
10	1 1/2	2 1/4	2 1/4	4	3 1/4	4
12	1 3/4	2 1/2	2 1/2	4	3 1/2	4 1/2
14	1-7/8	2 3/4	2 3/4	4	3 3/4	5
16	2	3	3		4	5
18 and over		2	3		4	5

**B. HANDLING,  
MANUFACTURE OR  
PROCESSING DEFECTS**

1. Wane (maximum allowable size in inches) Nominal face dimension in inches

2	1/8	1/2	1/2	
3	1/8	1/2	1/2	
4	1/4	5/8	5/8	
5	1/4	5/8	5/8	
6	3/8	3/4	3/4	
8	1/2	7/8	1	
10	5/8	1	1 1/4	
12	3/4	1-1/8	1 1/2	
14	7/8	1 1/2	1 3/4	
16	1	1 3/4	2	
18 and over		1 1/4	2	2 1/4

2. Torn grain (allowable depth in inches)

	1-1/6	2	2 1/4
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3. Skips, allowable size,  
in inches, not to  
exceed  
surface area

(width x  
length)

Depth  
Quantity

	with x 4	width x 4	width x 4
Depth	1/32	1/16	1/8
Quantity	1 skip per 16 ft or shorter length 8	1 skip per 16 ft or shorter length	1 skip per 16 ft or shorter length

\* The size of knots on the narrow face within the middle third of length may be increased proportionately towards the ends of the piece to twice the size permitted on the narrow face, but not to exceed that allowable along the center line of the wide face. The size of knots on the edge of wide face within the middle third of length may be increased proportionately towards the center along the center line of the wide face. The sum of the sizes of all knots in any 6 inches of length of the piece shall not exceed twice the maximum permissible size of knots. Two knots of maximum Cluster knots and knots in groups shall not be permitted.

**TABLE NO. 3.04 (C)**

**WORKING STRESSES FOR TANGILE AND RED LAUAN  
TO BE USED FOR DESIGN OF GLUED LAMINATED STRUCTURES**

	80% Grade		67 Grade	
	Tangile	Red Lauan	Tangile	Red Lauan
Extreme Fiber stress, bending, psi		2240	1900	1600
Modulus of Elasticity, bending x 10 <sup>3</sup> , psi		1320	1180	1120
Shear Parallel to Grain, psi		150	132	132
Compression Parallel to Grain, psi		1250	1000	850
Comp, Perpendicular to Grain, psi		300	250	200

For wet conditions of use, the following maximum percentages of Dry-Use stress shall be permitted:

f (bending) and t (tension), 80%  
 v (horizontal shear) and E (Modulus of Elasticity), 90%  
 fp (compression parallel to grain) and fp (perpendicular to grain), 70%

**TABLE NO. 3.04 (D)**

**GROUPING OF SPECIES FOR DETERMINING  
 ALLOWABLE LOADS FOR TIMBER JOINTS**

Specie	Specific Gravity	Specie	Specific Gravity	Specie	Specific Gravity
Malabayabas	0.87	Dalanghita	0.62	Tiaong	0.44
Dungon	.81	Dao	.62	Bagtikan	.43
Yakal	.74	Narig	.62	Almaciga	.42
Binggas	.72	Toog	.61	Almon	.41
Ipil	.68	Kamagong	.57	Tangile	.37
Malaguijo	.71	Dangkalan	.59	Manggasinoro	.37
Molave	.66	Pahunan	.55	Red Lauan	.36
Guijo	.65	Apitong	.55	White Lauan	.36
Manggachapul	.65	Mahogany	.54	Mayapis	.35
		Malugi	.52		
		Vidal Lanutan	.51		
		Narra	.50		
		Palosapis	.48		

**Section 3.07: Vertical Members or Assemblies**

(a) Column or Posts. All wood columns and posts shall be framed to true and bearings; shall extend down to supports of such design as to hold the column or post securely in position and to protect its base from deterioration; and shall be supported in basement or cellars by piers projecting at least 5 centimeters (2 inches) and above the finished floor and separated therefrom by an approved metal barrier, or when pressure-impregnated timber is used, it may be placed directly on concrete or masonry.

Untreated wood column in basement of cellars, when built into masonry portions or walls, shall be exposed on at least two sides.

(b) Stud walls and Bearing Partitions.

1. Placing. Studs in walls and partitions may be placed with their wide faces parallel to the wall or partition, provided the studs are considered as columns and

are designed accordingly. Stud walls shall have top and bottom plates to develop allowable bearing stresses perpendicular to the grain.

2. Size. Except as otherwise provided, exterior stud walls and bearing partitions for buildings of two stories or less shall consist of not less than 5 centimeters by 10 centimeters (2 inches by 4 inches) studs; for buildings of three stories, the studding shall be not less than 7.5 centimeters by 10 centimeters (3 inches by 4 inches) to the bottom of the second floor joists, and 5 centimeters by 10 centimeters (2 inches by 4 inches) for the two upper stories.
3. Height. Unless supported laterally by adequate framing, the maximum allowable height shall be:

3.0 meter (10 feet) for 5.0 cm. x 5 cm. (2 in. x 4 in.) stud framing  
4.2 meter (14 feet) for 10.0 cm. x 7.5 cm. (2 in. x 5 in.) stud framing  
4.8 meter (16 feet) for 7.5 cm. x 10.0 cm. (2 in. x 5 in.) stud framing  
6.0 meter (20 feet) for 5.0 cm. x 15.0 cm. (2 in. x 6 in.) stud framing

4. Spacing. Except for one-storey detached buildings of Group J Occupancy, where 60 centimeters (24 inches) spacing may be used, no studding shall be spaced more than 40 centimeters (16 inches) on centers unless vertical supporting members in the walls are designed as columns, or such walls may be constructed of not less than 10 cm. x 10 cm. (4 in. x 4 in.) posts spaced not more than 1.60 meters (5.4 feet) on centers or of larger members designed as required in this Chapter, or may be of post and beam framing with plank sheathing not less than 3.8 millimeters (1.5 inches) thick.
5. Corners and bracing. Angles or corners where stud walls or partitions meet shall be framed solid. All exterior walls and main cross stud partitions shall be effectively and thoroughly braced or sheathed with approved panels adequately nailed along all edges.
6. Pipes in walls. Stud partitions containing plumbing, heating or other pipes shall be so framed and the joists underneath so spaced as to give proper clearance for the piping. Where a partition containing such piping runs parallel to the floor joists, the joists underneath such partitions shall be doubled and spaced to permit the passage of such pipes and shall be bridged. Where plumbing, heating, or other pipes are placed in or partly in a partition, necessitating the cutting-in of the soles or plates, a metal tie not less than 3 millimeters (1/8 inch) thick and 3.8 millimeters (1.5 inches) wide shall be fastened to the plate across and to each side of the opening with not less than four 3½ inches long nails.
7. Separations from Chimneys. Combustible materials shall not be placed within 5 centimeters (2 inches) from smoke chamber walls or masonry chimney walls when built within a structure, or within 2.5 centimeters (1 inch) when the chimney is built entirely outside the structure.

8. Top plates. In bearing partitions the top plate shall be double and lapped at each intersection with walls or partitions. Joints in the upper and lower members of the top plates shall be staggered not less than 1.20 meters (4 feet).
9. Foundation plates. Stud walls resting on masonry or concrete shall have foundation plates or sills as provided in Sections 7.06 (e) and 3.07 (b).
10. Foundation studs. Foundation studs shall be not less than the studding above with a minimum of length of 35 centimeters (14 inches). When exceeding 1.20 meters (4 feet) in height, studs shall be of the size required for an additional storey.  
Foundation studs under bearing walls and partitions shall be thoroughly and effectively braced.
11. Bridging. All stud partitions or walls over 3.0 meters (10 feet) in height shall have bridging, not less than 5 centimeters (2 inches) in thickness and of the same width as the stud, fitted snugly and spiked into the studs at their mid-height, or other means for giving adequate lateral support to the studs. Bridging meeting the requirements of Section 3.08 may serve as required firestopping.
12. Headers. All openings 1.20 wide or less in bearing walls shall be provided with headers equivalent to double headers not less than 5 centimeters (2 inches) thick, placed on edge, securely fastened together and all openings more than 1.20 meters (4 feet) wide shall be trussed or provided with headers or lintels. Such headers or trusses shall have not less than 5 centimeters (2 inches) solid bearing at each end to the floor or bottom plate, unless other approved framing methods or joint devices are used.
  - (c) Walls without studs. Detached one-storey building of Group J Occupancy may have exterior walls framed without studs when of vertical 5 centimeters (2 inches) thicker planks, or when having a total floor area of not more than 45 square meters (500 square feet) may be of vertical one inch boards and battens.
  - (d) Laminated Walls and Partitions. Walls and partitions may be of laminated construction of not less than 10 centimeters (4 times) nominal thickness, with the structural assembly designed to support all loads.
  - (e) Interior Walls and Partitions. Interior partitions shall be constructed, framed, and firestopped as specified for exterior walls, except that interior nonbearing partitions may have a single top plate. In group I Occupancy nonbearing partitions constructed of 5 centimeters x 7.5 centimeters (2 inches x 3 inches) studs spaced 40 centimeters (16 inches) on center may be used.

Where wood-frame walls and partitions are covered on the interior with plaster, tile, or similar materials and are subject to water splash, the framing shall be protected with 15-pound asphalt-saturated felt.

### Section 3.08: Firestops

Firestopping shall be provided to cut off all concealed draft openings (both vertical and horizontal), and form an effective barrier between storeys, and between a top storey and roof space. It shall be used in specific locations, as follows:

1. In exterior or interior stud walls, at ceiling and floor levels.
2. In all stud walls and partitions, including furred spaces, so placed that the maximum dimension of any concealed space is not over 2.4 meters (8 feet).
3. Between stair stringers at least once in the middle portion of each run, at top and bottom, and between studs, along and in line with run of stair adjoining stud walls and partitions.
4. Around top, bottom, sides, and ends of sliding door pockets.
5. In spaces between chimneys and wood framing, loose incombustible materials shall be placed in incombustible supports, or a metal collar tightly fitted to the chimney and nailed to the wood framing may be used.

### Section 4.02: Types of Construction

(a) Three basic types of construction and associated design assumptions are permissible under the respective conditions stated herein after, and each will govern in a specific manner the size of members and the types and strength of their conditions.

(b) Type 1, commonly designed as "rigid-frame" (continuous frame), assumes that beam-to column connections have sufficient rigidity to hold virtually unchanged the original angles between intersecting members.

(c) Type 2, commonly designed as "conventional" or "simple" framing (unrestrained, free-ended), assumed that insofar as gravity loading is concerned, the ends of beams and girders are connected for shear only, and are free to rotate under gravity load.

(d) Type 3, commonly designed as "semi-rigid framing" (partially restrained), assumes that the connections of beams and girders possess a dependable and known moment capacity intermediate in degree between the complete rigidity of Type 1 and the complete flexibility of Type 2.

(e) The design of all connections shall be consistent with the assumptions as to type of construction called for on the design drawings.

(f) Type 1 construction is unconditionally permitted under this Code. Two different methods of design are recognized. Within the limitation laid down in Section 4.27, members of continuous frames, or continuous portions of frames may be proportioned, on the basis of their maximum predictable strength, to resist the specified design loads multiplied by the prescribed load factors, otherwise Type 1 construction shall be designed, within the limitations of Section 4.05, to resist the stresses produced by the specified design loads, assuming moment distribution in accordance with elastic theory.

(g) Type 2 construction is permitted under this Code, subject to the stipulations of the following paragraph wherever applicable.

(h) In ties buildings, designed in general as Type 2 construction (that is, with beam-to column connections other than wind connections assumed flexible under gravity loading) the distribution of the wind moments between selected-joints of the frame may be made by a recognized empirical method provided that:

1. The connection and connected member have the capacity to resist the wind moments.
2. The girder is adequate to carry the full gravity load as a "simple beam."
3. The connection has adequate inelastic rotation capacity to avoid overstress of the fasteners or welds under combined gravity and wind loading.

(i) Type 3 (semi-rigid) construction will be permitted only upon evidence that the connections to be used are capable of furnishing, as a minimum, a predictable proportion of full and restrained. The proportioning of main members joined by such connections shall be predicted upon no greater degree of end restraint than this minimum.

(j) Type 2 and 3 construction may necessitate some non-elastic but self-limiting deformation of the structural steel part.

Section 4.03: Loads and Forces

Dead Load.

- (a) The dead load to be assumed in design shall consist of the weight of steelwork and all material permanently fastened thereto or supported thereby.

Live Load.

- (a) The live load shall be that stipulated by the Code under which the structure is being designed or that dictated by the conditions involved.

Impact.

- (a) For structures carrying live loads which induce impact, the assumed live load shall be increased sufficiently to provide for same.
- (b) If not otherwise specified, the increase shall be

For supports of elevators.....	100 per cent
For travelling crane support griders and their connection .....	25 per cent

For supports of light machinery shaft or motor driven not less than.....	20 per cent
For support of reciprocating machinery or power driver units not less than.....	50 per cent
For hangers supporting floors and balconies.....	33 per cent

Crane Runway Horizontal Forces.

- (a) The lateral force on crane runway to provide for the effect of moving crane trolleys shall, if not otherwise specified, be 20 percent of the sum of the weights of the lifted load and of the crane trolley (but exclusive of other parts of the crane), applied at the top of rail, one-half on each side of the runway; and shall be considered as acting in either direction normal to the runway rail.
- (b) The longitudinal force shall, if not otherwise specified, be taken as 10 percent of the maximum wheel loads of the crane applied at the top of rail.

Wind.

- (a) Proper provisions shall be made for stresses caused by wind both during erection and after completion of the building.

Other forces.

- (a) Structural localities subject to earthquakes, hurricanes and other extraordinary conditions shall be designed with due regard for such conditions.

Minimum Loads.

- (a) In the absence of any applicable building Code requirements, the loads referred to in Section 4.03 above shall be not less than those recommended in the American Standard Building Code Requirements for Minimum Design, Loads in Building and other Structures, ASA A58, 1, latest edition.

Section 5.03: Materials

(a) Quality. The quality of the materials used in concrete and the quality of concrete shall conform to the physical and chemical properties as specified in this Chapter, and to the following standards:

MATERIALS	ASTM DESIGNATION
PORTLAND CEMENT	
Portland Cement.....	C150 or C175
Portland Blast Furnace Slag Cement.....	C205
Portland Puzzolan Cement.....	C340

AGGREGATES

Concrete.....	C33
Lightweight, for Structural Concrete.....	C330
<b>METAL REINFORCEMENT</b>	
Steel Bars.....	A615
Prestressed Steel Strand.....	A416
Prestressed Steel Wire.....	A421
Steel Bar Mats.....	A184
Welded Steel Wire Fabric.....	A185
<b>ADMIXTURES</b>	
Admixtures.....	C260
<b>CONCRETE COMPRESSION AND FLEXURE TEST SPECIMENS</b>	
Making and Curing - in the Field.....	C31
Test for Compressive Strength.....	C39
Making and Curing - in the Laboratory.....	C192
Splitting Tensile Strength.....	C496
<b>READY-MIXED CONCRETE.....</b>	<b>C94</b>

(b) Portland Cement. Portland shall conform to ASTM C150. If provisions are made for sufficient damp curing of the concrete in the structure to develop a compressive strength at least equal to that of concrete containing cement conforming to the first paragraph, portland type cements which conform to the following standards may be used: ASTM C205 or C340.

(c) Concrete Aggregate. Concrete aggregate shall conform to ASTM specification C33 or C330, except that aggregates failing to meet these specifications but which have been shown by special test or actual service to produce concrete of adequate strength and durability may be used under Section 5.04 (c), Method 2, where authorized by the Engineer.

Except as permitted elsewhere in this Chapter, the maximum size of the aggregate shall be not lesser than one-fifth of the narrowest dimension between sides of the forms of the member of which the concrete is to be used nor larger than three-fourths of the minimum clear spacing between individual reinforcing bars or bundles or bars.

(d) Water. Water used in mixing concrete shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances that may be deleterious to concrete or steel. Mortar cubes made with nonpotable mixing water shall have 7-day and 28-day strengths equal to at least 90 per cent of the strengths of similar specimens made with potable water.

(e) Metal Reinforcement. Reinforcing bars shall conform to ASTM Specification A615.

If reinforcing bars are to be welded these specifications shall be supplemented by requirements assuring satisfactory weldability.

Bar and rod mats for concrete reinforcement shall conform to ASTM Specification A184.

Wire for concrete reinforcement shall conform to ASTM Specification A82.

Welder wire fabric for concrete reinforcement shall conform to ASTM Specification A185 except that the weld shear strength requirement of those specifications shall be extended to include a wire size differential up to and including six gauges.

Wire and strands for prestressed concrete shall conform to ASTM Specifications A421 and A416.

Structural steel shall conform to ASTM Specification A26.

Steel pipe for concrete-filled pipe columns shall conform to Grade B of ASTM Specification A53.

Cast-iron for composite columns shall conform to ASTM Specification A377.

(f) Admixtures. Admixtures, if used, shall conform to ASTM Specification C494.

(g) Storage of Materials. Cement and aggregate shall be stored in such a manner as to prevent their deterioration or the intrusion of foreign matter. Any material which has deteriorated or which has been damaged shall not be used for concrete.

#### Section 5.04: Concrete Quality

(a) Notations. The notations used in these regulations are defined as follows:

$f_c$  = compressive strength of concrete (See Section 5.02)

$f_{sp}$  = ratio of splitting tensile strength to the square root of compressive strength.  
(Table 5.04-A)

(b) Concrete Quality. For the design of reinforced concrete structures, the value of  $f_c$  shall be used in determining stresses in Section 5.09 to Section 5.13 and strengths in Section 5.14 to Section 5.18.

All plans submitted for approval or used for any project shall clearly show the specified strength  $f_c$  of concrete at the specified age for which each part of the structure was designed.

Concrete that will be exposed to sulfate-containing or other chemically aggressive solutions shall be proportioned in accordance with ACI Standard 613 and 613A.

(c) Methods of Determining the Proportions of Concrete. The determination of the proportions of cement, aggregate, and water to attain the required strengths shall be made by one of the following methods, but lower water-cement ratios may be required for conformance with Section 5.04(b).

Method 1. Without preliminary tests.

Where preliminary test data on the materials to be used in the concrete have not been obtained, the water-cement ratio for a given strength of concrete shall not exceed the values shown in Table No. 5.04-A. When strength in excess of 210 kilograms per square centimeter (3000 pounds per square inch) are required or

when light-weight aggregates or admixtures (other than those exclusively for the purpose of entraining air) are used, the required water-cement ratio shall be determined in accordance with Method 2.

Method 2. For combination of materials previously evaluated or to be established by trial mixture.

Water-cement ratios or strengths greater than shown in Table 5.04-A may be used provided that the relationship between strength and water-cement ratio for the materials to be used has been previously established by reliable test data and the resulting concrete satisfies the requirements of Section 5.04(e).

Where previous data are not available, concrete trial mixtures having proportions and consistency suitable for the work shall be made using at least three different water-cement ratios (or cement content in the case of lightweight aggregates) which will produce a range of strength encompassing those required for the work. For each water-cement ratio (or cement content), least three specimens for each age to be tested shall be made, cured and tested for strength in accordance with ASTM Specifications C39 and C192.

The strength tests shall be made at 28 days or the earlier age at which the concrete is to receive load, as indicated on the plans. A curve shall be established showing the relationship between water-cement ratio (or cement content) and compressive strength. The maximum permissible water-cement ratio for the concrete to be used in the structure shall be that shown by the curve to produce an average strength to satisfy the requirements of Section 5.04 (e) provided that the water-cement ratio shall be no greater than that required by Section 5.04 (b).

Where different materials are to be used for different portions of the work, each combination shall be evaluated separately.

**TABLE 5.04 - A**

**MAXIMUM PERMISSIBLE WATER-CEMENT RATIOS  
FOR CONCRETE (METHOD 1)<sup>1</sup>**

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**MAXIMUM PERMISSIBLE WATER-CEMENT RATIO<sup>2</sup>**

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SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS, PS I f <sub>C</sub>	NON-AIR ENTRAINED CONCRETE		AIR-ENTRAINED CONCRETE	
	U.S. Gal. Per 94-lb. Bag of	Absolute Ratio	U.S. Gal. Per 94-lb. Bag of	Ratio Absolute

	Cement	by Weight	Cement	by Weight
2000	7-½	0.663	7	0.620
2500	7-½	0.642	6-¼	0.554
3000	6-¾	0.576	5-¼	0.465
3500	5-¾	0.510	4-½	0.399
4000	5	0.443	4	0.354

<sup>1</sup>The minimum cement content shall be no less than five bags per cubic yard (a bag weighing not less than 94 pounds) unless the mix is designed in accordance with the provisions of Method 2 of Section 5.04(c).

<sup>2</sup>Including free surface moisture on aggregate.

(d) Concrete Proportions and Consistency. The proportions of aggregate to cement for any concrete shall be such as to produce a mixture which will work readily into the corners and angles of the forms and around reinforcement with the method of placing employed on the work, but without permitting the materials to segregate or excess free water to collect on the surface.

The methods of measuring concrete materials shall be such that the proportions can be accurately controlled and easily checked at any time during the work.

(e) Strength Tests of Concrete. Tests of concrete shall be required for all concrete having an ultimate compressive strength in excess of 140 kilograms per square centimeter (2000 pounds per square inch). On other concrete work, tests may be required for the concrete and other materials from time to time to determine whether such materials or methods of use are such as to produce concrete of the quality specified and used in accordance with the design of the building or structure. When tests are required, each class of concrete shall be represented by at least five tests (10 specimens). Two specimens shall be made for each 100 cubic meters (130 for each day's concreting. The required number of tests may be modified for jobs involving less than 100 cubic meters (130 cubic yards). All such tests shall be made by an approved agency, and copies of the results shall be submitted to the Owner or his duly authorized representative. Specimen for concrete cylinder tests shall be taken at the place where the concrete is being deposited and shall be taken and cured in accordance with the requirements set forth in ASTM Specification C31 and tested in accordance with the requirements set for in ASTM Specification C39. samples from which compression test specimens are molded shall be secured in accordance with or as a basis for acceptance of concrete shall be made and laboratory-cured in accordance with ASTM Specification C31. Additional test specimens cured entirely under field conditions may be required to check the adequacy of curing and protection of the concrete. Strength tests shall be made in accordance with ASTM Specification C39.

The age for strength tests shall be 28 days or, where specified, the earlier age at which the concrete is to receive its full load or maximum stress. Additional tests may be made at earlier ages to obtain advance information on the adequacy of strength development where age-strength relationships have been established for the materials and proportions used.

To conform to the requirements of this chapter:

1. For structures designed in accordance with the working stress design method of the chapter, the average of any five consecutive strength tests of the laboratory-cured specimens representing each class of concrete shall be equal to or greater than the specified strength,  $f_c$ , and not more than 20 per cent of the strength tests shall have values less than the specified strength.
2. For structures designed in accordance with the ultimate strength design method of this chapter, and for pre-stressed structures the average of any three consecutive strength tests of the laboratory-cured specimens representing each class of concrete shall be equal to or greater than the specified strength,  $f_c$ , and not more than 10 per cent of the strength tests shall have values less than the specified strength.

When it appears that the laboratory-cured specimens will fail to conform to the requirements for strength, the Engineer shall have the right to order changes in the concrete sufficient to increase the strength to meet these requirements. The strengths of any specimens cured on the job are intended to indicate the adequacy of protection and curing of the concrete and may be used to determine when the forms may be stripped, shoring removed, or the structure placed in service. When, in the opinion of the Engineer, the strengths of the job-cured specimens, the contractor may be required to improve the procedures herein or when tests of field-cured cylinders indicate deficiencies in protection and curing, the Engineer may require tests in accordance with ASTM Specification C42 or order load tests as outlined in Section 5.31 for that portion of the structure where the questionable concrete has been placed.

(f) Splitting Tensile Tests of Concrete. To determine the splitting ratio,  $F_{sp}$ , for a particular aggregate, tests of concrete shall be made as follows:

1. Twenty-four 15 cm. dia. by 30 cm. long (6 in. dia. by 12 in. long) cylinders shall be made in accordance with ASTM Specification C192, 12 at a compressive strength level of approximately 210 kilograms per square centimeter (3,000 pounds per square inch) and 12 at approximately 280 kilograms per square centimeter (4,000 pounds per square inch) or 350 kilograms per square centimeter (5,000 pounds per square inch). After seven days moist curing followed by 21 days drying at 23°C (73°F) and 50 per cent relative humidity, eight of the test cylinders at each of the two strength levels shall be tested for splitting strength and four for compressive strength.
2. The splitting tensile strength shall be determined in accordance with ASTM Specification C496, and the compressive strength of all 16 splitting tensile tests and all 8 compressive tests.

The ratio,  $F_{sp}$ , of splitting tensile strength to the square root of compressive strength shall be obtained by using the average of all 16 splitting tensile tests and all 8 compressive tests.

(g) Minimum strength. Concrete, other than fill, shall have a minimum ultimate compressive strength at 28 days of 140 kilograms per square centimeter (2,000 lbs. per sq. in.).

#### Section 5.06: Formwork.

(b) Removal of Forms. No construction loads exceeding the structural design loads shall be supported upon any unshored portion of the structure under construction. No construction load shall be supported upon, nor any shoring removed from any part of the structure under the construction until that portion of the structure has attained sufficient strength to support safely its weight and the loads placed

thereon. This strength may be demonstrated by job-cured test specimens and by a structural analysis considering the proposed loads in relation to these test strengths. Such analysis and test data shall be furnished by the contractor to the Engineer.

Forms shall be removed in such manner as to insure the complete safety of the structure. Where the structure as a whole is adequately supported on shores, the removable floor forms, beam and girder sides, column and similar vertical forms may be removed after 24 hours provided the concrete is sufficiently strong not to be injured thereby."Form supports of prestressed members may be removed when sufficient prestressing has been applied to enable them to carry their dead loads and anticipated construction loads.

#### Section 5.08: Design -General Considerations

(b) Design Methods. The design of reinforced concrete members shall be made either with reference to allowable working stresses, service loads, and the accepted straightline theory of flexure as outlined in Section 5.09 to Section 5.13 (Working Stress Design) or with reference to load factors and strengths as outlined in Section 5.14 to Section 5.18 (Ultimate Strength Design).

#### (k) Limiting Dimensions of Columns.

1. Minimum size. Columns constituting the principal support of a floor or roof shall have a diameter of at least 25 centimeters (10 inches), or in the case of rectangular columns, a thickness of at least 20 centimeter (8 inches), and a gross area not less than 600 square centimeters (96 square inches).

2. Isolated column with multiple spirals. If two or more interlocking spirals are used in a column, the outer boundary of the column shall be taken at a distance outside the extreme limits of the spiral equal to the requirements of Section 5.07 (h).

3. Limits of section of column built monolithically with wall. For a spiral column built monolithically with a concrete wall or pier, the outer boundary of the column section shall be taken either as a circle at least 38 millimeters (1½ inches), outside the column spiral or as a square or rectangle, the side of which are at least 38 millimeters (1½ inches) outside the spiral or spirals.

4. Equivalent circular column. As an exception to the general procedure of utilizing the full gross area of the column section, it shall be permissible to design a circular column and to build it with a square, octagonal, or other shaped section of the least lateral dimension. In such case, the allowable load, the gross area considered, and the required percentages of reinforcement shall be taken as those of the circular column.

5. Limits of Column Section. In a tied column which has a larger cross section than required by considerations of loading, a reduced effective area  $A_g$ , not less than one-half of the total area may be used for determining minimum steel area and load capacity.

(l) Limits for Reinforcement of Columns. The vertical reinforcement for columns shall be not less than 0.01 nor more than 0.08 times the gross cross-sectional area. The minimum size of bar shall be 16

millimeters in diameter (No. 5). The minimum number of bars shall be six for spiral columns and four for tied columns.

The ratio of spiral reinforcement  $P_s$ , shall be not less than the value given by

$$P_s = 0.45 (A_g / A_c - 1) f_c / f_y \dots\dots\dots (5.08-1)$$

where:

$f_y$  = the yield strength of spiral reinforcement but not more than 4,200 kilograms per square centimeter (60,000 pounds per square inch).

**Section 5.09: Allowable Stresses. Working Stress Design**

(a) Notations. The notations used in these regulations are defined as follows:

- $f_c$  = Compressive stress in concrete
- $f_c'$  = Compressive strength of concrete (see Section 5.02)
- $n$  = ratio of modulus of elasticity of steel to that of concrete
- $v$  = shear stress
- $v_c$  = shear stress carried by the concrete
- $w$  = weight of concrete, pounds per cubic foot

(b) General. For structure to be designed with reference to allowable stresses, service loads, and the accepted straight-line theory of stress and strain in flexure, the allowable stresses of this Section shall be used, and designs shall conform to all provisions of this Code except sections 5.14 and 5.18.

(c) Allowable Stresses in Concrete. The stresses for flexure and bearing on all concrete designed in accordance with Section 5.09 to 5.13 shall not exceed the values set forth in Table 5.09-A.

The stresses for shear shall not exceed those set forth in Table 5.09-A, except as specified in Section 5.11.

The allowable stresses for bond shall not exceed those specified in Section 5.12.

(d) Allowable Stresses in Reinforcement. Unless otherwise provided in this Chapter, steel for reinforcement shall not be stressed in excess of the following limits:

In tension:

For billet-steel or axle-steel concrete reinforcing bars of structural grade .....	18,000 psi.
For main reinforcement, 9.52 millimeters (3/8 inch) or less in diameter, in one-way slabs of not more than 3.6 meters (12 feet) span, 50 per cent of the minimum yield strength specified in the ASTM Standards for the particular kind and grade of steel used, but not to exceed .....	30,000 psi.
For deformed bars with a yield strength of 60,000 psi. or more and in sizes No. 11 and smaller .....	24,000 psi
Cold drawn steel wire in welded wire fabric	

reinforcement .....	30,000 psi.
For all other reinforcement .....	20,000 psi.
In compression, vertical column reinforcement Spiral columns, 40 per cent of the minimum yield strength, but not to exceed .....	30,000 psi.
Tied columns, 85 per cent of the value for spiral columns, but not to exceed .....	25,000 psi.
Composite and combination Columns:	
Steel with minimum yield strength of 36,000 psi. ....	18,000 psi.
Steel with minimum yield strength of 33,000 psi. ....	16,000 psi.
Cast iron sections .....	10,000 psi.
Steel pipe (See limitations of Section 5.13 (g) )	
For compression in flexural members, see Section 5.10 (c).	
Spirals (yield strength for use in Formula 5.08-1)	
Hot rolled rods, intermediate grade .....	40,000 psi.
Hot rolled rods, hard grade .....	50,000 psi.
Hot rolled rods of minimum yield strength of 60,000 psi., and cold-drawn wire .....	60,000 psi.

**TABLE 5.09 - A**

**ALLOWABLE STRESSES IN CONCRETE**

DESCRIPTION	ALLOWABLE STRESSES				
	FOR ANY STRENGTH OF CONCRETE $f_c'$				
	CONCRETE IN ACCORDANCE WITH SECTION 5.04 (c)	2,000 p.s.i.	2,500 p.s.i.	3,000 p.s.i.	4,000 p.s.i.
Modulus of elasticity ratio, n	29,000,000	11	10	9	8
For concrete weighing 145 lbs. per cu. ft. See Section 5.10(c) n	1.5 W 33 $f_c'$				
Flexure: $f_c$					
Extreme fiber stress in compression	0.45 $f_c'$	900	1125	1350	1800
Extreme fiber stress in tension in plain concrete					

footings and walls	1.6 fc'	71	80	88	102
Shear: $v$ (as a measure of diagonal tension at a distance "d" from the face of the support), $v_c$	1.1 fc'		49 <sup>1</sup>	55	60 70
Beams with no web reinforcement, $v_c$					
Joists with no web reinforcement, $v_c$	1.2 fc'		54	61	66 77
Members with vertical or inclined reinforcement or properly combined bent bars and vertical stirrups, $v$	5 fc'		223	250	274 316
Slabs and footings (peripheral shear Section 5.11 (j), $v_c$ )	2 fc'	89	100	110	126
Shear in Walls: <sup>2</sup>					
Shear carries by concrete <sup>3</sup>					
H/D 1 $V_C$	3 fc'	134	150	164	190
H/D 2.7 $V_C$	1.1 fc'	49	55	60	70
Shear carried by concrete and reinforcement					
H/D 1 $v$	3 fc'		134	130	164 190
H/D 2 $v$	5 fc'	223	250	274	316
Bearing: $f_c$					
On full area	0.25 fc'	500	625	750	1000
on one-third area or less <sup>5</sup>	0.375 fc'	750	938	1125	1500

- 
1. For shear values for lightweight aggregate concrete, see Section 5.11 (K).
  2. For earthquake resisting shear walls, these values must be modified in accordance with Section 5.29
  3. For values between "H/D" of 1.0 and 2.7, the allowable shear varies linearly.
  4. For lightweight concrete, multiply tabulated values by .15Fsp. For values between "H/D" of 1.0 and 2.0, the allowable shear varies linearly.
  5. This increase shall be permitted only when the least distance between the edges of the loaded and unloaded areas, is a minimum of one-fourth of the parallel side dimension of the loaded area. The allowable bearing stress on a reasonably concentric area greater than 1/3 but less than the full area shall be interpreted between the values given.

### Section 5.30: Plain Concrete

(a) General. Plain concrete, other than fill, shall have a minimum ultimate compressive strength at 28 days of 140 kilograms per square centimeter (2000 pounds per square inch) and material proportioning, and placing shall conform to the requirement of this Chapter. Concrete made with lightweight aggregate may be used with strength less than 140 kilograms per square centimeter (2000 pounds per square inch) if it has been shown by tests or experience have sufficient strength and durability.

Provisions shall be made to care for temperature and shrinkage stresses either by use of reinforcement or by means of joints.

Plain concrete construction shall conform to the detailed minimum requirements specified in this Chapter. Where Chapter 2 is applicable, plain concrete also shall be designed in accordance with the allowable stresses specified in this Chapter.

(b) Wall thickness. The thickness of plain concrete walls may be 5 centimeters (2 inches) less than the required by 6.17 plain masonry walls but in no case less than 18 centimeters (7 inches) and the ratio of unsupported height or length (whichever is the lesser) to thickness shall be not greater than 22.

(c) Design. Plain concrete walls shall be designed to withstand all vertical and horizontal loads as specified in Chapter 1.

(d) Stresses. The allowable working stresses in plain concrete walls shall not exceed the following percentage of ultimate strength.

Compression .....	0.25 f 'c
Tension .....	$1.6 \sqrt{f 'c}$
Shear .....	0.02 f 'c

### Section 5.31: Load Tests on Structures

(a) Notations. The notations used in these regulations are defined as follows:

D = dead load.

L = live load.

A = maximum deflection, produced by a test load, of a member relative to the ends of the span, or of the free end of a cantilever relative to its support.

l = span of member under load test (the shorter span of flat slabs and of slabs supported on four sides). The span, except as provided in Section 5.31 (c) 3, is the distance between the centers of the supports or the clear distance between supports plus the depth of the member, whichever is smaller (in inches).

t = total thickness or depth of member under load test (in inches).

(b) Static Load Tests of Structures. The Engineer shall have the right to order the test under load of any portion of a structure when conditions are such that cause doubt about the safety of the structure.

A load test of a structure shall not be made until the portion subjected to load is at least 56 days old, unless the owner of the structure agrees to the test being made at an earlier age.

When the whole structure is not to be tested, the portion of the structure though to provide the least margin of safety shall be selected for loading. Prior to the application of the test load a load which simulates the effect of that portion of the service dead load which is not already present shall be applied and shall remain in place until after a decision has been made regarding the acceptability of the structure. The test load shall not be applied until the structural members to be tested have borne the full dead load for at least 48 hours.

Immediately prior to the application of the test load to flexural members (including beams, slabs, and floor and roof constructions), the necessary initial readings shall be made for the measurements of deflections (and strains, if these are considered necessary) caused by the application of the test load.

The members selected for loading shall be subjected to a superimposed test load equivalent to 0.3 times the dead load plus 1.7 times the live load (test load =  $0.3D + 1.7L$ ). The test load shall be applied without shock to the structure and in a manner to avoid arching of the loading materials.

The test load shall be left in position for 24 hours whereupon readings of the deflections shall be taken. The test load shall be removed and additional readings of deflections shall be taken 24 hours after the removal of the test load.

(c) Criteria for Evaluation of Load Tests. If the structure shows evident failure or fails to meet the following criteria, the changes needed to make the structure adequate for the rated capacity shall be made or a lower rating may be established as follows:

1. If the maximum deflection,  $\Delta$ , is less than  $L^2 / 20,000t$ , the requirements on recovery of deflection in sub-paragraph may be waived.
2. If the maximum deflection,  $\Delta$ , of a reinforced concrete beam, floor or roof exceed  $L^2 / 20,000t$ , the recovery of deflection within 24 hours after the removal of the test load shall be at least 75 per cent of the maximum deflection.
3. In determining the limiting deflection for a cantilever,  $L^2$  shall be taken as twice the distance from the support to the end, and the deflection shall be adjusted for movement of the support.
4. Construction failing to show 75 per cent recovery of the deflection may be retested. The second test loading shall not be made until at least 72 hours after removal of the test load for the first test. The structure shall show no evidence of failure in the retest, and the recovery of deflection caused by the second test load shall be at least 75 per cent.

## CHAPTER 6

### MASONRY

#### Section 6.01: Materials

(a) General. The quality and design of materials assembled in masonry work shall conform with internationally accepted engineering standards and specifications, subject to the provisions of this Code. The materials included in masonry work shall be classified as: structural clay products, pre-cast products, adobe stone, clay brick, natural stones of irregular units, reclaimed masonry units, pre-cast lintels, mortar, grout, and reinforcement.

(b) Other Materials. Any masonry material other than those specified in this Chapter, which is incombustible and sufficiently close to the characteristics of any of the materials classified under this Chapter may be added by the Building Official in the classification of the material to which it most closely resembles: provided, however, that such material shall have passed actual tests in accordance with applicable standards, not only as separate units but also as combined.

#### Section 6.07: Standard Minimum Requirements

##### (a) Columns

- (1) If the load on the pilaster can be carried by a length of wall equal to 4 times the thickness of the wall then the pilaster is in essence only constructed for convenience of connections, and, or to remove eccentricity from the wall. In this case the pilaster is nominal in size and reinforcing. Otherwise the pilaster must be designed and considered a column.
- (2) Masonry columns shall have a minimum nominal dimension of 30 centimeters (12 inches) and a maximum height of 20 times their least dimension. Columns which are stressed to less than 1/2 of their allowable stress may have a 20 centimeters (8 inches) minimum dimension. Vertical reinforcement shall be a minimum of 1/2 of one percent and a maximum of 4 percent (4%) of the gross cross-sectional area of the column. Columns which are stressed to less than 1.2 of their allowable stresses may have their reinforcement reduced to a minimum of 1/5 of one percent. In all cases the reinforcement of columns shall not be less than 4 bars of 1 centimeters (3/8 inch) minimum diameter.
- (3) Lateral ties shall be not less than 3.76 millimeters in diameter (Gauge No. 9) wire and shall be spaced not over 16 bar diameters, or the least dimension of the column. Ties may be placed in the mortar joint or in contact with the vertical steel.

##### (b) Walls

- (1) Reinforced masonry shear and bearing shall be limited by a ratio of height to thickness of 25, where the word "height" is taken to mean the clear distance between lateral supports. The minimum thickness of bearing walls shall be 15 centimeters (6 inches). Reinforced masonry non-bearing walls shall be limited by a ratio of height to thickness of 48 for interior walls and 30 for exterior walls.
- (2) In computing flexural stresses where reinforcement occurs, the effective width shall be not greater than four times the wall thickness, the center to center distance between reinforcement, no 1.20 meters (4 feet). Where stack bond is used, the

effective width shall be not greater than 3 times the unit length nor 60 centimeters (2 feet) in solid unit masonry and not greater than 1-½ times the unit length nor 60 centimeters (2 feet) in hallow unit masonry.

- (3) The spacing of vertical reinforcement shall be not greater 1.20 meters (4 feet) nor 12 times the wall thickness. The minimum size of vertical reinforcing bars shall be 1 centimeter (3/8 inch) in diameter. The minimum amount of vertical reinforcement shall be one-twentieth of one percent 1/20% of the gross cross-sectional horizontal area of the masonry portion of the wall. There shall be a minimum of one vertical bar continuous between lateral supports and each side of each opening and each corner.
- (4) The spacing of horizontal reinforcement shall be not greater than 80 centimeters (2 feet, 8 inches). The minimum amount of horizontal reinforcement shall be one-tenth of one per cent of cross-sectional vertical area of the wall. There shall be continuous horizontal reinforcement at the top of the foundation wall, at each floor level, at the top of the wall, and at the lintel height. Horizontal reinforcement shall be distributed in the wall in approximate conformity with the corss-sectional area of the wall. Wire reinforcement where it has trussed cross-wires or cross-wires perpendicular to the longitudinal wires providing not less than one cross-wire in each 40 centimeters (1 foot, 4 inches) length tied to the two longitudinal wires, but shall not be used to resist design loads other than shear. Where wire reinforcement is used it shall be spaced not more than .60 centimeters (2 feet) on center vertically.
- (5) Decorative masonry block walls, partitions or dividers shall be assumed non-bearing and shall be reinforced by not less than 1 centimeter (3/8 inch) diameter steel bars at not more than .60 centimeters (2 feet) each way but not more than 4 times the wall thickness and, or provided with a properly designed reinforced concrete framing; provided, that ratio of height to thickness of such framed decorative masonry block wall shall be limited to 16.

#### (c) Beams

- (1) The longitudinal reinforcement in a reinforced masonry beam shall be not less than one-fifth of one per cent of the gross cross-sectional area, nor less than 2.6 square centimeters (0.4 square inch). The minimum depth shall be 20 centimeters (8 inches) and the minimum width shall be 15 centimeters (6 inches). Wall reinforcement may be used as beam reinforcement for both shear and flexure, when the beam is an integral part of a reinforced masonry wall, except that wire reinforcement shall not be considered as resisting design stresses other than shear.

#### (d) Contraction Joints

- (1) Where there is a large change in the mass of the wall, such as at large truck doors, contraction joints shall be provided. Contraction joints shall be spaced at 15 meters (50 feet) or center maximum and their location shall be at critical changes in cross-section.

## Section 6.08: Construction Standards

### (a) General

- (1) Every part of the work shall be executed in the best workmanlike manner in accordance with the accepted practice of the trade and in full compliance with the provision of this Chapter.

### (b) Foundation

- (1) Where foundation beams are used, such as between piling or other supports, in expansive soil or unstable ground, provision shall be made for differential movement of the soil relative to the beam and the pile or other support.
- (2) The depth of the bottom of the footing shall not be less than 45 centimeters (18 inches) below natural grade.
- (3) Footings made of masonry units shall be limited to small structures such as dwellings and one story buildings only.

### (c) Shoring and Scaffolding

Shoring and scaffolding shall be undertaken properly and adequately so as to support or brace masonry units during construction and throughout the period of hardening of its grout.

### (d) Grout

- (1) All reinforcement shall be free from coatings that would destroy or reduce bond.
- (2) The kind of reinforcement and method of its placement for masonry work shall be the same in quality and standard set forth for reinforced concrete to construction as specified in this Code, except for the following: lap splicing shall develop the strength of a full bar. Grout thickness between masonry units and reinforcement shall not be less than 0.7 centimeters (1/4 inch) or not less than 1/2 bar diameter or the maximum size of aggregate.

### (f) Bonding

- (1) **Stack Bond.** Where stack bond is indicated, bond beams or approved horizontal and vertical joint reinforcement shall be provided adequate to resist lateral forces due to wind or earthquake.
- (2) **Mechanical Bond.** Mechanical bonding shall be obtained by use of metal ties laid in the horizontal mortar joints. Such ties shall be required when the grout pour is excessive in wall construction of layers where the thickness exceeds 5.0

centimeters (2 inches). Metal ties bonding layers together shall be placed horizontally at 30.5 centimeters (12 inches) maximum on centers.

(g) Joints

- (1) Moving Units After Placing. Masonry units shall not be moved after they have been in contact with the mortar. Tapping units downward may be permissible but not to rock or slide them.
- (2) Joining Old and New Work. The intersection of new and old work shall be adequately bonded and dowelled to provide for continuity of the masonry.
- (3) Construction Joints. Where fresh masonry joints what is partially set or totally set, the exposed surface of the finished masonry shall be cleaned and damped when necessary to obtain the best possible bond with the new work. All loose masonry units and mortar shall be removed. Construction joints shall not be permitted in any beam, only if approved by the Engineer.

(h) Corbelling. The projection for each course in a corbel when used to support structural members, shall be designed and detailed by the Engineer.

(i) Chases and Recesses. Chases and recesses in masonry walls shall not be constructed as to reduce the required strength, thickness or fire resistance of the wall. Chases and recesses shall be designed and constructed as openings. Wood nailers shall not be inserted into masonry walls. Metal mailing clips may be used. Unless where this is required the design of the wall shall take the wood into consideration and the pockets shall be provided with proper clearance.

(j) Arches and Lintels. Lintels over openings shall be of reinforced masonry or other incombustible materials.

(k) Adjoining Construction

- (1) Joining Concrete and Masonry. Wherever feasible the concrete shall be poured against masonry and dowelled adequately. Where masonry be placed against concrete, extreme care shall be used to insure adequate bonding of the masonry to the concrete by dowelling, or bolts or other connections.
- (2) Joining Structural Steel and Masonry. Where structural steel columns are adjacent to masonry, there shall be a space of 2.5 centimeters (1 inch) clearance to be filled solidly with mortar to allow for steel tolerances, or with an expansion joint material where a control joint is designed. The structural steel shall be connected to the masonry by bolts, or by steel plates properly designed.
- (3) Imbedding structural steel columns partially in masonry. This shall be avoided, unless special reinforcing is provided, and necessary construction joints are provided in the masonry at this point. Structural steel columns entirely within masonry, the masonry shall be connected by dowels tied to the column for horizontal reinforcing.

- (4) Bolts and Anchors. All bolts and anchors should be embedded thoroughly into the mortar or grout not less than two-thirds of the wall thickness.
- (5) Pipes and Conduits. No pipe or conduit shall be embedded in any structural masonry less than the required fire protection except, that rigid electric conduits may be embedded in structural masonry, provided their location does not impair the strength of construction. Any pipe or conduit may pass through any masonry by means of sleeves placed not closer than three diameters, center to center.
- (6) Bearing Plates. Beams, firders, or other concentrated loads supported by a wall or pier shall have bearing at least 7.6 centimeters (3 inches) in length into the masonry. Metal bearing plates or continuous reinforced masonry members may be used to distribute the loads along the wall.

Section 6.09: Testing

(a) Testing of masonry materials shall be done by the applicable government bodies or their authorized agencies, according to testing procedures and other relevant requirements needed for such tests.

**TABLE 6.06 - A**

**ALLOWABLE STRESSES FOR A SPECIFIED REINFORCED MASONRY CONSTRUCTION**

The following allowable stresses may be used where Brick units or Hollow Concrete units conform to ASTM requirements, the mortar and grout conform to Section 6.01 and the construction practice conform to Section 6.06 of this chapter.

	kg/cm <sup>2</sup>	Psi	
Compression - axial	21	300	
Compression - flexural	35	500	
Shear (no shear reinforcement)	2	30	
Shear (with reinforcement taking entire shear)	5	75	
Bearing	26	375	
Modulus of Elasticity		105,000	1,500,000
Modulus of Rigidity		42,000	600,000
Bond - plain bars	4	60	
Bond - deformed bars		11	160

**TABLE 6.06-B**

## ALLOWABLE STRESSES AS RELATED TO $f'm$

Compression - axial	0.20		
Compression - flexural	0.33		
Shear (no shear reinforcement)			
(maximum)	0.02		
Shear (with reinforcement	2.8	(40 psi)	
taking entire shear)	0.05		
(maximum)	2.8	(100 psi)	
Bearing	0.25		
Modulus of Elasticity	1,000		
Modulus of Rigidity	400		
Bond - plain bars	4	(60 psi)	
Bond - deformed bars	11	(160 psi)	

**TABLE 6.06 - C**

Compressive Strength of Units*		Assume $f'm^{**}$	
(kg/cm <sup>2</sup> )	(psi)	(kg/cm <sup>2</sup> )	(psi)
70	1,000	63	900
103	1,500	80	1,150
175	2,500	109	1,500
280	4,000	140	2,000
420	6,000	168	2,400

\* Compressive strength is here taken on the gross area of solid masonry units and the net area of hollow masonry units.

\*\*In no case shall the assumed  $f'm$  be greater than the compressive strength of the mortar or grout, whichever is lesser.

## CHAPTER 7

### EXCAVATIONS, FOUNDATIONS, AND RETAINING WALLS

Section 7.01: Quality and Design

(a) The quality and design of materials used structurally in excavations, footings and foundations shall conform to the requirements specified in Chapters 1, 2, 3, 4, 5, 6 and 7.

#### Section 7.02: Excavation and Fills

(a) General. Excavations or fills for any buildings or structure and excavations or fills accessory thereto shall be so constructed or protected that they do not endanger life and property.

Cut edge for permanent excavations shall not be steeper than 1½ horizontal to 1 vertical and slopes for permanent fills shall not be steeper than 2 horizontal to 1 vertical unless substantiating data justifying steeper slopes are submitted. Deviation from the foregoing limitations for slopes shall be permitted only upon the presentation of a soil investigation report acceptable to the Building Official.

No fill or other surcharges loads shall be placed adjacent to any building or structure unless such building or structure is capable of withstanding the additional loads caused by the fill or surcharge.

Footings or foundations which may be affected by any excavation shall be underprinted adequately, or otherwise protected against settlement, and shall be protected against lateral movement.

Fills to be used to support the foundations of any building or structure shall be placed in accordance with accepted engineering practice. A soil investigation report and a report of satisfactory placement of fill, both acceptable to the Building Official, shall be submitted.

(b) Protection of Adjoining Property. Any person making or causing an excavation to be made below existing grade shall protect the excavation so that the soil of adjoining property will not cave-in or settle and shall defray the cost of underpinning or extending the foundation of buildings on adjoining properties. Before commencing the excavation, the person making or causing the excavation to be made shall notify in writing the owners of adjoining buildings not less than 10 days before such excavation is to be made that the excavation is to be given access to the excavation for the purpose of verifying if their properties are sufficiently protected by the person making the excavation. Likewise, the person causing such excavation shall be given access to enter the adjoining property for the pose of physical examination of such property, prior to the commencement and at reasonable periods during the progress of excavation. If the necessary consent is not accorded to the person making the excavation, then it shall be the duty of the person refusing such permission to protect his buildings or structure. The person causing the excavation shall not be responsible for damages on account of such refusal by the adjoining property owner to permit access for inspection. In case there is a party wall along a lotline of the premises where an excavation is being made, the person causing the excavation to be made shall at his own expense, preserve such party wall in s safe a condition as it was before the excavation was commenced and shall, when necessary, underpin and support the same by adequate methods.

(c) Structure Unsafe of Commencement of Excavation. If the person who causes an excavation to be made has reason to believe an adjoining or adjacent structure is below minimum standard of constructin, such person shall forthwith report his findings officially in writing to the Building Official who shall cause an inspection of such premises to be made, and if such structure is found unsafe, he shall delcare such structure to make ti safe, or its demolition as the circumstances mayu demand.

(d) Protection of Excavation. Guards or fences shall be provided along open sides of excavation except that, in the discretion of the building inspector, such guards or fence may be omitted from any side or sides other than those adjacent to streets or public passageways.

### Section 7.03: Soil Classification

(a) General. It is the responsibility of the Engineer to order adequate soil exploration (including test borings) for any building or structure of any height if in his judgment such is necessary. However, test borings shall be required for buildings of four (4) stories and higher. The classification of the soil under all portions of every building shall be based upon the examination of adequate test borings excavations made at the site. The location of the test borings or excavations and the nature of the sub-surface materials shall be indicated on the plans.

(b) Moisture Content. Due allowance shall be made a determining the capacity of sub-surface materials for the effect of possible change in moisture content.

(c) Unequal Loads. Where footings are to be placed at varying elevations the effects of adjacent loads shall be included in the foundation analysis.

### Section 7.04: Allowable Soil Pressure

(a) The allowable unit soil pressure upon every footing shall not exceed the value as set forth in Table 7.04 (B).

EXCEPTION: The tabulated values may be modified as prescribed in Section 7.05.

### Section 7.05: Soil Requirements

(a) Requirements. Whenever, in the opinion of the Building Official, the adequacy and class of a soil cannot be determined by the test borings or excavations required by the provision of Section 7.03 (a), he may require a special soil investigation before approving the use of the footing.

(b) Deviations. Deviations from the allowable unit soil pressure set forth in Table 7.04(A) and Table 7.04(B) shall be permitted only after performance of a special soil investigation by an agency acceptable to the Building Official. The Building Official may approve such deviations only after receiving a written opinion from the investigating agency together with substantiating evidence.

(c) Load Tests. Where the bearing capacity of the soil is not definitely known or is in question, the Building Official may require load tests or other adequate proof as to the permissible safe bearing capacity, at the particular location. To determine the safe bearing capacity of the soil, it may be tested by loading an area not less than 0.2 square meters (2 square feet) to not less than twice the maximum bearing capacity desired for use. Such load shall be sustained by the soil until no additional settlement takes place for a period of not less than 48 hours in order that such desired bearing capacity may be used. Examination of sub-soil conditions may be required when deemed necessary.

**TABLE 7.04 - (A)**

## ALLOWBLE SOIL PRESSURE

CLASSIFICATION OF MATERIAL ADJACENT VIRGIN GRIOUND	MINIMUM DEPTH OF	FOOTING BELOW- FOOTING IS AT MINIMUM DEPTH	INCREASE IN VALUE	FOR EACH FOOT OF	VALUE PER- MISSIBLE IF IS BELOW MINIMUM DEPTH	DEPTH THAT FOOTING	MAXIMUM VALUE	1	2
	Meter	Ft	Kg./Sq.M	PSF	Kg./Sq.M	PSF	Kg./Sq.M	PSF	3
ROCK	0.20 0.30		20% ultimate 1-0 crushing strength		20% ultimate 0 0 crushing strength				
Compact Coarse Sand	0.60M	2-0	7,500*	1,500*	1,500*	300*	40,000	8,000	
Compact fine sand	0.60M	2-0	5,000*	1,000*	1,000*	200*	40,000	8,000	
Loose sand	0.90M	3-0	2,500*	500*	500*	100*	15,000	3,000	
Hard clay or sandy clay	0.60M	2-0	20,000	4,000	4,000	800	40,000	8,000	
Medium-stiff clay or sandy clay	0.60M	2-0	10,000	1,000	1,000	200	30,000	6,000	
Soft sandy clay or clay	0.90M	3-0	5,000	250	250	50	10,000	2,000	
Compact inorganic sand silt mixtures	0.60M	2-0	5,000	1,000	1,000	200	20,000	4,000	
Loose inorganic sand silt mixtures	0.90M	3-0	2,500	500	500	100	5,000	1,000	
Loose organic and silt mixtures and muck				0	0	0	0	0	0

\*These values are for footing 30 cm. (1'0") in width and may be increased in direct proportion to the width of the footing to a maximum of three times the designed values.

**TABLE 7.04 - (B)**

### ALLOWABLE LATERAL SOIL PRESSURES

ALLOWABLE VALUES				
CLASS OF MATERIAL	PER FOOT OF DEPTH*		MAXIMUM ALLOWABLE	
	BELOW NATURAL GRADE		V A L U E S	
	k.s.m.	p.s.f.	k.s.m.	p.s.f.
Good-compact well graded sand and gravel				
Well-graded fine and coarse sand (all drained so water will not stand)	2,000		400	40,000
				8,000
Average-compact fine sand				
Medium clay				
Loose coarse sand and gravel (All drained so water will not stand)	1,000		200	12,500
				2,500
Poor-soft Clay				
Clay Loam				
Poorly Compacted Sand	500		100	7,500
Clays containing large amount of silt (water stands during wet season)				1,500

\*Isolated poles such as flagpoles, or signs may be designed using lateral bearing values equal to two times tabulated values.

**REPUBLIC OF THE PHILIPPINES**

Department of Public  
Works, Transportation  
and Communications  
Quezon City

Department of Local Gov't.  
and Community Development  
Quezon City Hall,  
Quezon City

JOINT MEMORANDUM CIRCULAR - August 17, 1977

TO : ALL PROVINCIAL GOVERNORS, CITY MAYORS, MUNICIPAL MAYORS  
AND ENGINEERS

**SUBJECT : DISSEMINATING P.D. NO. 1096 OTHERWISE KNOWN AS THE NATIONAL BUILDING CODE OF THE PHILIPPINES AND ITS IMPLEMENTING RULES**

For the information and guidance of all concerned the President has enabled the National Building Code effective as of February 19, 1977 and its implementing rules and regulations have been promulgated by the Secretary of Public Works, Transportation and Communications on June 16, 1977.

**Scope** - The code shall apply to the design, location, siting, construction, alternation, repair, conversion, use, occupancy, maintenance, moving demolition of, and addition to public and private buildings and structures, except traditional indigenous family dwellings as defined therein.

**Exception** - Buildings and/or structures construction before the approval of the code shall not be affected thereby except when alterations, additions, conversions or repairs are to be made in which case, the code shall apply only to portions to be altered, added, converted or repaired.

Public buildings and traditional indigenous family dwellings are exempt from the payment of building permit fees. The code defines the term traditional indigenous family dwellings to mean a dwelling intended for the use of the owner only constructed of native materials such as bamboo, nipa, logs or lumber, the total cost of which does not exceed fifteen thousand pesos (Sec. 209).

**Administration and Enforcement** - The administration and enforcement of the code including the imposition of penalties for administrative violations thereof is vested with the Secretary of Public Works, Transportation and Communications (Sec. 201). He exercises the following powers and functions:

- (1) Formulate policies, plans, standards and guidelines on building design, construction, use, occupancy and maintenance, in accordance with the Code.
- (2) Issue and promulgate the rules and regulations to implement the provisions of the Code and ensure compliance with policies, plans, standards and guidelines formulated under paragraph 1, Sec. 203 of the code.
- (3) Evaluate, review, approve and/or take final action on changes and/or amendments to existing referral codes as well as on the incorporation of other referral codes which are not yet expressly made part of the National Building Code.
- (4) Prescribe and fix the amount of fees and other charges that the building official shall collect in connection with the performance of regulatory functions.

The duties of issuing building permits and the enforcement of the building code in the field rest with the Building Official (Sec. 207). Due to exigencies of the service, the Secretary of DPWTC may designate incumbent Public Works District Engineers, City Engineers and Municipal Engineers to act as Building Officials in their respective areas of jurisdiction (sec. 205).

**Effectivity of implementing Rules** - Sec. 211 of the Code provides that the implementing rules and regulations formulated by the Secretary DPWTC shall take effect after their publication once a week for three consecutive weeks in a newspaper of general circulation.

The implementing rules as prescribed by the Secretary DPWTC covers the following:

Rule I Building Permit Application

Rule II Processing of Application for Building Permits

Annex A Processing of Application for Building Permits

Annex A-1 Processing of Application for Sectional Permit

Annex B Interim Guidelines for Land use and Zoning

Rule III Assessment, Imposition and Collection of Fees (Prescribing the new rates)

Sharing of Fees - Section 208 of the code provides that the Building Official is hereby authorized to retain not more than 20% of his collection for the operating expenses of his office and that the remaining 80% shall be deposited with the provincial, city or municipal treasurer and shall accrue to the general fund of the province, city or municipality.

Role of Local Executives:

Local executives shall cease to exercise the function of issuing building permits upon the effectivity of the implementing rules of the Building Code. In the absence of a Building Official in the city/municipality they shall forward applications for building permits except for buildings exempt from the operation of the code to the nearest DPWTC District Engineer.

As a part of their executive function they shall oversee the implementation of the code within their respective jurisdiction and call the attention of the Building Official, copy furnished the Secretary of Public Works, Transportation and Communications on any problem or irregularities that may occur or arise.

They shall assist in the conduct of informational campaign to secure the compliance of the citizens to the code to assure that local buildings and structures are maintained in a safe, sanitary and good working condition and that the required environmental safeguards are met.

The names and bio-data of municipal and city engineers may be submitted to the Secretary DPWTC so that they may be considered for designation as building officials.

Please be guided accordingly.

(SG.) ALDREDO L. JUINIO  
DPWTC

(SGD.) JOSE A. RONO  
DLGCD

## MEMORANDUM OF AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This Memorandum of Agreement entered into and executed this 1st day of August 1978, by and between The Ministry of National Defense herein represented by its Minister, Honorable Juan Ponce Enrile

and

The Ministry of Public Works, Transportation and Communications herein represented by its Minister, Honorable Alfredo L. Juinio

### W I T N E S S E T H

WHEREAS, the President enacted the National Building Code (NBC, PD 1096) on February 19, 1977 and the Fire Code of the Philippines (FCP, PD 1185) on August 26, 1977;

WHEREAS, the NBC applies to the design, location, siting, construction, alteration, repair, conversion, use, occupancy, maintenance, moving, demolition of, and addition to public and private buildings and structures, except traditional indigeneous family dwellings as defined therein;

WHEREAS, the FCP is primarily concerned with the proper maintenance, safety and protection of buildings and structures against fire;

WHEREAS, the implementing rules and regulations of the FCP, among other things, also apply to the design and installation of electrical systems and mechanical and refrigeration equipment, as well as to the architectural, structural and other engineering requirements of buildings;

WHEREAS, the above cited implementing rules and regulations of FCP particularly Divisions 2-15 of Rule 3 are already prescribed functions vested in the Office of the Building Official under the provisions of the NBC;

WHEREAS, it is desirable that the NBC (PD 1096) and the FCP (PD 1185) be harmonized so as to complement and supplement the provisions of the NBC nationwide;

WHEREAS, to date, Offices of Building Officials have already been organized with the necessary technical staff to enforce and implement the provisions of the NBC nationwide;

WHEREAS, for purposes of effective and economical implementation of the NBC and FCP and their implementing rules and regulations, as well as for the expeditious processing of building permits, the NBC provides for the integration under the Office of the Building Official of all functions relating to the architectural, structural, mechanical and sanitary engineering, plumbing and fire resistive and protective requirements for the design, construction of buildings and structures as well as the installation therein of safety and other fire-protective devices and/or systems;

NOW, THEREFORE, the Parties to this Memorandum of Agreement hereby agree as follows:

#### A. PRE-CONSTRUCTION PHASE:

1. The Building Official shall have the overall administrative control and/or supervision over all activities relating to processing and issuing of building permits covering the construction, addition, repair, renovation and demolition of all buildings and/or structures within the area of his responsibility.

Upon receipt of the Application for Building Permit, the Building Official shall refer one (1) set of the plans and specifications to the Chief of the Local Fire Service (CLFS) for his evaluation, review, and/or recommendation with respect to fire safety and control requirements. The CLFS shall submit his report and recommendations to the Building Official within five (5) working days from date of referral. Failure of the CLFS to act within said period shall mean that the plans and specifications submitted conform with all the requirements of the FCP. The Building Official shall within fifteen (15) days take the necessary action towards the issuance or non-issuance of the building permit as provided for in the NBC.

2. Before the issuance of a building permit, the Building Official shall require the applicant to pay the necessary fees to the Local Treasurer or other authorized collecting agents of the Ministry of Public Works, Transportation and Communications in accordance with the provisions of the NBC. When is directed by the Minister of Public Works, Transportation and Communications, said authorized collecting agents shall also collect as provided for by the FCP an amount equivalent to one tenth of one percent (0.1%) of the cost of construction of the building or structure based on the schedule of cost of construction in accordance with Section 4, Rule III, of the Implementing Rules and Regulations of the NBC, but not to exceed P50,000 and remit the same to the Treasurer of the Philippines.

#### B. CONSTRUCTION PHASE:

1. Upon issuance of a building permit, the Building Official, shall without delay indorse a copy of such permit to the CLFS and require him to undertake the necessary inspection of the building during its construction in accordance with the FCP and its implementing rules and regulations. The results and frequency of these inspections shall be duly entered into the Construction Logbook sheet and the same shall be reported in writing to the Building Official for appropriate action.
2. Upon submission of the Certificate of Completion of Construction by the engineer or architect in Charge of Construction, the Building Official shall notify the CLFS, to conduct his final Inspection and require him to submit his Fire Safety Inspection Certificate within five (5) working days from receipt of notification; Provided, that in case of non-issuance, suspension or revocation of said certificate of fire safety inspection by the CLFS, he shall so state in writing the reasons or grounds therefor.

3. After final inspection requirements of the NBC and the FCP are complied with, the Building Official shall issue the Certificate of Use or Occupancy, a copy of which shall be provided to the CLFS.

#### C. POST-CONSTRUCTION PHASE:

1. The Building Official and the CLFS shall inspect buildings or structures jointly or separately to determine compliance with the provisions of the NBC and the FCP and their implementing rules and regulations. In case of separate inspection;
  - a) Violations of the NBC or the FCP noted by the CLFS, requiring corrective measures involving alteration, modification, repair, etc., of the building/structure including architectural, structural, electrical, mechanical, sanitary and plumbing, light and ventilation system, etc., shall be reported to the Building Official for appropriate action.
  - b) Violations of the FCP or the NBC noted by the Building Official pertaining to fire-prevention, detection and warning, suppression and protection shall be reported to the CLFS for appropriate action.
2. The Building Official shall conduct annual inspection of buildings and structures to determine compliance with land use, architectural, structural, sanitary, plumbing, electrical, and mechanical requirements.
3. The CLFS shall conduct regular inspection of buildings and their premises for the purpose of checking on potential sources of fire and the proper maintenance of fire protection, suppression, prevention and/or warning system.

#### D. ABATEMENT/DEMOLITION:

1. The Director General, INP or his duly authorized representative and the Building Official shall exercise authority relating to the abatement/demolition of hazardous and/or ruinous building and structures and/or any portion thereof in accordance with their respective powers and functions under the FCP and NBC.

However, when such authority is being exercised by either one of them, it shall be incumbent upon the other to extend his assistance to the former. For this purpose, the following procedure/arrangement shall be observed:

- a) The INP shall provide security to the Building Official and/or his authorized representative and personnel and shall maintain peace and order in the premises of the subject of abatement or demolition.
- b) The Building Official shall in turn extend his assistance in supervising and allowing the use of whatever available equipment and personnel he has that may be needed for abatement or demolition.

2. The Building Official or his authorized representative without interfering with the functions of the fire investigators, shall be allowed access to the premises of the fire scene after the fire has been extinguished, for the purpose of determining architectural, structural, mechanical, electrical and sanitary deficiencies, which might have been the cause of or contributory to the fire.

E. CONFLICT:

1. In case of conflict in the interpretation and implementation of this Memorandum of Agreement relative to the Pre-Construction and Construction Phases up to the issuance of Certificate of Occupancy, the decision of the Building Official shall prevail.
2. Problems arising from the implementation of this Memorandum Agreement shall as much as possible be resolved by lateral coordination between the Director General, INP and the Executive Director of the Building Research Development Staff of the Ministry of Public Works, Transportation and Communications.

This Agreement shall take effect on 1 August 1978 and the Parties concerned shall circularize the same to all CLFS and Building Officials for their information, guidance and implementation.

IN WITNESS HEREOF, the Parties have herein affixed their signatures in Quezon City, Metro Manila on the date first abovementioned.

MINISTRY OF PUBLIC WORKS,  
TRANSPORATATION & COMMUNICATIONS

MINISTRY OF NATIONAL DEFENSE

BY:

BY

ALFREDO L. JUINIO  
Minister

JUAN PONCE ENRILE  
Minister

Signed in the Presence of:

ROSALIA A. MALLONGA  
Assistant Minister for Operations  
and  
Executive Director, BRDS

FIDEL V. RAMOS  
Major General, AFP  
Chief of Constabulary and  
Director General Integrated National Police

**MEMORANDUM OF AGREEMENT**

Know All Men By These Presents:

This Memorandum of Agreement made and executed in Manila, Philippines, this 6th day of January, 1978, by and between:

The National Census and Statistics Office hereinafter referred to as NCSO, with principal office at Solicarel Building Sta. Mesa, Manila, and represented in this agreement by its Executived Director Tito A. Mijares.

AND

The Department of Public Works, Transportation and Communications, hereinafter referred to as DPWTC, with principal office at NIA Building, Epifanio delos Santos Avenue, Quezon City, and represented in this agreement by its Secretary, Alfredo L. Junio.

W I T N E S S E T H

WHEREAS, Presidential Decree No. 1096 otherwise known as the "National Building Code of the Philippines", which vested the authority to implement the provisions of the said code, including the monitoring of building permit forms, to the DPWTC, became operational in 1977;

WHEREAS, because of the need for reliable construction statistics, the NCSO and the Department of Local Governments and Community Development entered into an informal agreement in 1976 to implement and monitor the building permit forms; and

WHEREAS, the Inter-Agency Committee on Industrial Statistics, hereinafter referred to as the Committee, was created through NEDA Memorandum Order No. 15-76 to rationalize and integrate the production of industrial statistics including construction in all its aspects including collection, processing and analysis.

NOW, THEREFORE, for in consideration of the foregoing, representatives hereto have agreed on the following:

1. This agreement shall cover the collection, processing, analysis and dissemination of private construction statistics on a quarterly basis.
2. Initially, the NCSO will shoulder the cost of printing of approximately 200,000 sets of five copies each of building permit and certificate of completion report forms for CY 1978, thereafter the responsibility will be that of DPWTC. Preparation of other forms as may be required by P.D. 1096 shall be the responsibility of DPWTC.
3. The DPWTC will be responsible for the distribution of these forms to their local building officials.
4. The local building official will furnish through the municipal census officers or census assitants as the case may be, the NCSO copy of the said construction forms.
5. It is the responsibility of DPWTC to see to it that the building permit and certificate of completion report forms are properly filled up (complete and legible).

6. The processing and publication of official construction statistics emanating from these forms will be the responsibility of the NCSO and will be in the form and manner as may be agreed upon by the members of the Committee.

IN WITNESS WHEREOF, the parties hereto have executed this agreement on the date and place mentioned above.

NATIONAL CENSUS AND  
STATISTICS OFFICE

DEPARTMENT OF PUBLIC WORKS,  
TRANSPORTATION & COMMUNICATIONS

TITO A. MIJARES  
Executive Director

ALFREDO L. JUINIO  
Secretary

Signed in the Presence of:

LILIA H. CONSTANTINO  
Acting Chairman  
Inter-Agency Committee on  
Industrial Statistics

ROSALIO A. MALLONGA  
Assitant Secretary  
for Operations  
Exec. Director - BRDS

OPINION NO. 18, s. 1978

3rd Indorsement  
January 26, 1978

Respectfully returned to City engineer Bonifacio D. Estanero, Office of the City Engineer, City of Tangub, Region X, Bureau of Public Works, City of Tangub.

The enclosures disclose that the City Engineer of Tangub brought to the attention of its City Fiscal the excavation and installation by the Mobil Service Station thereat of an underground steel tank in its premises without the permit required in P.D. No. 1096 (the National Building Code), despite three notices to stop said illegal activities sent to said service station by the City Engineer; and that the Engineer requested the Fiscal to take appropriate legal action against the service station before the matter is elevated "to higher authorities in Manila". In reply, the fiscal averred that he had no information as to when P.D. No. 1096 was officially promulgated or any knowledge of its implementing rules, that the enforcement of said Code including the imposition of penalties for violation thereof is vested in the Secretary of the Department of Public Works, Transportation and Communications (DPWTC); and that it was his opinion that the enforcement of the provisions of said Code "belongs to the proper department or agency specially vested by the law".

Pursuant to practice and precedents, the Secretary of Justice as Attorney General renders opinion only for the national government officials mentioned in Section 83 of the Revised Administrative Code, on questions of law arising in the performance of their respective functions. While the City Engineer is not one such official, I have to consider that what is involved in this case is a ruling of the city fiscal of Tangub who falls under the supervision and control of the Secretary of Justice. Therefore, in order to set a right the thinking of the City Fiscal on the matter, I hereunder express my views thereon.

P.D. No. 1096 was promulgated and became effective on February 19, 1977. Sections 213 and 301 thereof provide insofar as pertinent:

"SEC. 213. Penal Provisions

*"It shall be unlawful for any person, firm or corporation, to erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equip, use, occupy or maintain any building or structure or cause the same to be done contrary to or in violation of any provision of this Code.*

*Any person, firm or corporation who shall violate any of the provisions of this Code and/or commit any act hereby declared to be unlawful shall upon conviction, be punished by a fine of not more than twenty thousand pesos or by imprisonment of not more than two years or by both such fine and imprisonment, x x x "* (Underscoring supplied).

"SEC. 301 Building Permits

"No person , firm or corporation, including any agency, or instrumentality of the government shall erect, construct, alter, repair, move, convert or demolish any building or structure or cause the same to be done without first obtaining a building permit therefor from the Building Official assigned in the place where the subject building is located or the building work is to be done".

Therefore, once it has been determined by the Tangub City Engineer, who is the city's Building Official, that *there has been a violation under the above-quoted provisions, he may file a sworn statement to that effect with the City Fiscal and it is incumbent upon th latter to proceed with the preliminary investigation of the charges, and with the prosecution if thereby warranted, as in other criminal cases.*

Please be guided accordingly.

(SGD.) VICENTE ABAD SANTOS  
Secretary of Justice

Copy furnished:  
Acting City Fiscal Jose A. Velasco  
Tangub City

**National Structural Code as a referral Code of PD 1096**  
REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
OFFICE OF THE SECRETARY  
MANILA

May 5, 1992

ENGR. ENGRACIO P. DE GRACIA  
President  
Association of Structural Engineer  
of the Philippines, Inc.  
5th Floor, Mareic Building, Tordesillas Street  
Salcedo Village, Makati, Metro Manila  
Dear Engr. De Gracia:

We are pleased to inform you that the Department of Public Works and Highways has completed the review and evaluation of the proposed Fourth Edition of the *National Structural Code of the Philippines, Volume I - Buildings, Towers and Other Vertical Structures, 1992.* The Code was found to have provided the minimum standards to assure public safety. It has also taken into account the latest codal and technological developments that could improve safeguards against major failure and loss of life.

By virtue of the authority vested in the Secretary pursuant to Section 203(3) of the National Building Code of the Philippines (PD 1096), the Fourth Edition of the *National Structural Code of the Philippines, Volume 1, 1992 is hereby approved as a referral Code of PD 1096.*

Very truly yours,

(Sgd.) JOSE DE JESUS  
Secretary

Significant changes incorporated in the Fourth Edition are as follows:

\*Chapter I. This chapter has been revised to cover only design and construction requirements. Minimum design loads provisions have been transferred to Chapter 2. A new design requirement requires an independent design review of the structure in high seismic areas. Construction involvement and qualification of a structural engineer are also defined.

\*Chapter 2. The Zoning map has been changed to indicate two seismic zones, 2 & 4. Sections on seismic forces have been entirely changed to conform with the provisions of 1988 SEAOC. It is more specific in its definition of structural systems, irregularities, and the details of dynamic analysis. The wind requirements have been revised to conform with the provision of 1988 Uniform Building Code, (UBC).

\*Chapter 3. This chapter is an adoption from the 1988 U.B.C. chapter on wood. the material data, however, refers to Philippine Wood as determined by the Forest Product Research Insitute (FOPRIDECOM).

\*Chapter 4. This chapter on steel has been left unchanged from the previous edition except for the addition of a Part 3. this part provides additional design and detailing requirements to reach the levels of inelastic strength and stability of the structure subjected to substantial earthquake effects.

\*Chapter 5. Special provision for seismic design of concrete structures, previously Appendix A of Third Edition has been made an integral part of this Chapter. The rprovisions for the development length for bars in tension, and tension lap splices have also been significantly revised.

\*Chapter 6. The provisions of the Third Edition for masonry have been adopted without change.

\*Chapter 7 & 8. Chapter 8 "grading andEqrthworks" has been added. the provisions are adopted from the 1988 U.B.C. edited to suit local conditions.

(Sgd.) EFREN H. SISON  
Past President ASEP Overall Chairman NSCP 1992 Edition

**MPW FORM NO. 77-003-B**

Republic of the Philippines  
Ministry of Public Works  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District/City/Municipality

NOTICE OF ILLEGAL CONSTRUCTION

\_\_\_\_\_ Notice

\_\_\_\_\_  
Date Issued

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Sir/Madam:

This is to inform that you have made an illegal construction/renovation/addition/assemblage/  
demolition (others) \_\_\_\_\_ in violation of Section \_\_\_\_\_  
of the "National Building Code" (PD 1096). Compliance with the following is advised to wit:

Stop immediately illegal building activities in your premises.

You or your representative contact this Office within three (3) days from receipt  
hereof

\_\_\_\_\_

Failure to comply with this Notice shall cause this Office to institute proper legal action against you.

\_\_\_\_\_  
Building Official

Received: \_\_\_\_\_  
(Owner)

Date : \_\_\_\_\_

**MPW FORM NO. 77-004-B**

CERTIFICATE OF COMPLETION

THE BUILDING OFFICIAL  
AREA CODE NO. \_\_\_\_\_

THIS IS TO CERTIFY THT THE CONSTRUCTION OF THE BUILDING COVERED BY BUILDING PERMIT NO. \_\_\_\_\_ ISSUED ON \_\_\_\_\_ HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS ON FILE WITH THE OFFICE OF THE BUILDING OFFICIAL AND THE "NATIONAL BUILDING CODE" (PD. 1096).

THAT THE SAID BUILDING AND/OR STRUCTURE IS READY FOR FINAL INSPECTION FOR THE ISSUANCE OF THE "CERTIFICATE OF OCCUPANCY".

NAME OF OWNER \_\_\_\_\_  
(LAST NAME) (GIVEN) (MIDDLE)

ADDRESS OF OWNER \_\_\_\_\_

LOCATION OF CONSTRUCTION \_\_\_\_\_

USE OR TYPE OF OCCUPANCY \_\_\_\_\_

DATE OF START OF CONSTRUCTION:  
PROPOSED \_\_\_\_\_ ACTUAL \_\_\_\_\_

DATE OF COMPLETION:  
EXPECTED \_\_\_\_\_ ACTUAL \_\_\_\_\_

NO. OF STORIES \_\_\_\_\_ ACTUAL HEIGHT \_\_\_\_\_

ESTIMATED COST P \_\_\_\_\_

ACTUAL COST P \_\_\_\_\_ (FOR STATISTICAL PURPOSES ONLY)

- a) MATERIALS (TOTAL COST) P \_\_\_\_\_
  - 1. CEMENT bags \_\_\_\_\_
  - 2. LUMBER (cubic meter) \_\_\_\_\_
  - 3. REINFORCING BARS (kg.) \_\_\_\_\_
  - 4. NO. OF G.I. SHEETS \_\_\_\_\_
  - 5. PRE-FAB STRUCTURAL STEEL (kg) \_\_\_\_\_
- b) DIRECT LABOR (TOTAL COST) P \_\_\_\_\_

THIS INCLUDES COMPENSATION WHETHER BY SALARY OR CONTRACT FOR PROJECT ARCHITECT/ENGINEER DOWN TO LABORERS.

c) RENTAL OF EQUIPMENT (IF ANY) \_\_\_\_\_

d) OTHER COSTS P \_\_\_\_\_

THIS INCLUDES PROFESSIONAL SERVICE FEES, PERMITS AND OTHER FEES.

IF CONSTRUCTION IS UNDERTAKEN BY CONTRACT:

\_\_\_\_\_  
ARCHITECT/CIVIL ENGINEER (IN-CHARGE OF CONSTRUCTION)      CONTRACTOR  
PRC REG. NO. \_\_\_\_\_ CLASS \_\_\_\_\_  
TAN \_\_\_\_\_ RES. CERT. \_\_\_\_\_  
CONFORME: ADDRESS \_\_\_\_\_

\_\_\_\_\_  
OWNER/APPLICANT  
**MPW FORM NO. 77-005-B**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District./City/Municipality  
Area Code No. \_\_\_\_\_

APPLICATION FOR CERTIFICATE OF OCCUPANCY  
(For Building Occupied Prior to PD 1096)

Name \_\_\_\_\_ of \_\_\_\_\_ Applicant/Owner:

Date: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_

Location \_\_\_\_\_ of \_\_\_\_\_ the \_\_\_\_\_ Building:

Type of Construction: \_\_\_\_\_  
Type \_\_\_\_\_ of \_\_\_\_\_ Occupancy:

No. of Storeys: \_\_\_\_\_ Total Floor Area: \_\_\_\_\_  
Date \_\_\_\_\_ of \_\_\_\_\_ Completion \_\_\_\_\_ of \_\_\_\_\_ Construction:

Building Permit No. (if any): \_\_\_\_\_ Date:

Rea \_\_\_\_\_ Property \_\_\_\_\_ Tax \_\_\_\_\_ Declaration \_\_\_\_\_ No.:

I, \_\_\_\_\_ of \_\_\_\_\_  
(Name) (Address)

\_\_\_\_\_ do hereby certify under oath that I am the owner/authorized representative of the owner of the building described above which was completed and actually occupied in \_\_\_\_\_.

I further certify to my honest belief that the building is not hazardous to public safety and the electrical, mechanical and sanitary facilities are in order for the reason that the building has been occupied continuously since its completion.

This sworn statement is executed for the purpose of securing Certificate of Occupancy for the Building described above.

\_\_\_\_\_  
Applicant/Owner

A C K N O W L E D G E M E N T

City/Municipality \_\_\_\_\_ )  
Republic of the Philippines \_\_\_\_\_ ) SS

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 19 \_\_\_\_\_,  
applicant/owner/representative exhibiting to me his residence Certificate No. A \_\_\_\_\_ issued on  
\_\_\_\_\_ at \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

Doc. No. \_\_\_\_\_  
Page No. \_\_\_\_\_  
Book No. \_\_\_\_\_  
Series of \_\_\_\_\_

**MPW FORM NO. 77-008-B**

Republic of the Philippines  
Ministry of Public Works  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District/City/Municipality

A F F I D A V I T

(For Building Lots Affected by Road Widening and Other Proposed Development Projects)

KNOW ALL MEN BY THESE PRESENTS:

That I \_\_\_\_\_, Filipino citizen of legal  
age, married to \_\_\_\_\_/single, residing and with  
postal address at \_\_\_\_\_, City/  
Municipality of \_\_\_\_\_, Philippines, owner of  
the proposed building of \_\_\_\_\_, and  
materials to be used as \_\_\_\_\_, to be  
constructed (reconstructed in original Lot No. \_\_\_\_\_, Block No.  
\_\_\_\_\_, Subdivision \_\_\_\_\_ covered by  
Transfer Certificate of Title No.) \_\_\_\_\_, located at \_\_\_\_\_  
\_\_\_\_\_ and of the lot on which said building is to be  
constructed (reconstructed);

That the said building, if constructed, is affected by the proposed \_\_\_\_\_  
\_\_\_\_\_ or the widening of \_\_\_\_\_ Street;



\_\_\_\_\_  
(NOTARY PUBLIC)  
Until December 31, 19 \_\_\_\_\_

Doc. No. \_\_\_\_\_  
Page No. \_\_\_\_\_  
Book No. \_\_\_\_\_  
Series of \_\_\_\_\_

**MPW FORM NO. 77-010-B**

REPUBLIC OF THE PHILIPPINES  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District/City/Municipality  
Area Code \_\_\_\_\_

**APPLICATION FOR CHANGE OF USE OR OCCUPANCY**

NAME OF APPLICANT: \_\_\_\_\_  
LAST NAME GIVEN NAME MIDDLE NAME

ADDRESS OF APPLICANT: \_\_\_\_\_

LOCATION OF BUILDING: \_\_\_\_\_  
(Attached vicinity sketch)

USE OR TYPE OF OCCUPANCY:  
EXISTING \_\_\_\_\_ PROPOSED \_\_\_\_\_

OCCUPANT LOAD:  
EXISTING \_\_\_\_\_ PROPOSED \_\_\_\_\_

NO OF STORIES:  
EXISTING \_\_\_\_\_ PROPOSED \_\_\_\_\_

FLOOR AREA:  
EXISTING \_\_\_\_\_ ADDITIONAL \_\_\_\_\_ AREA AFFECTED BY CHANGE \_\_\_\_\_

TYPE OF CONSTRUCTION:  
EXISTING \_\_\_\_\_ PROPOSED \_\_\_\_\_

DATE OF COMPLETION OF EXISTING BUILDING \_\_\_\_\_

BUILDING PERMIT (if any) \_\_\_\_\_ DATE \_\_\_\_\_

ORIGINAL CERTIFICATE OF OCCUPANCY NO. \_\_\_\_\_

SUBMITTED BY:

\_\_\_\_\_  
APPLICANT

Conforme:

\_\_\_\_\_  
Residence Cert. No. \_\_\_\_\_  
OWNER OF BUILDING Date Issued \_\_\_\_\_  
Place \_\_\_\_\_

\_\_\_\_\_  
BUILDING OFFICIAL

\_\_\_\_\_  
DATE

**MPW FORM NO. 77-011-B**

REPUBLIC OF THE PHILIPPINES  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District/City/Municipality  
Area Code \_\_\_\_\_

**LOG BOOK SHEET**

Building Permit No. \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Manpower Organization

Equipment Use

Weather

Date

ACTIVITIES

(If the construction is undertaken by contract)

Prepared by \_\_\_\_\_

Submitted by \_\_\_\_\_

Contractor Contractor's License No. _____ Date Issued _____	Architect / Civil Engineer In-charge of Construction Sign and Seal
---	--

COMMENTS / RECOMMENDATIONS :

\_\_\_\_\_  
Building Official / Inspector

\_\_\_\_\_  
Date

**MPW FORM NO. 77-012-B**

Page No. \_\_\_\_\_ at \_\_\_\_\_

REPUBLIC OF THE PHILIPPINES  
 MINISTRY OF PUBLIC WORKS  
 OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District / City / Municipality

OWNER \_\_\_\_\_ Type of Construction \_\_\_\_\_  
 Location \_\_\_\_\_ Permit No. \_\_\_\_\_ Date \_\_\_\_\_  
 Architect or Civil Engineer In-Charge of Construction \_\_\_\_\_

The following requirements have to be verified by the Building Inspector before proceeding with any subsequent work.

1. Line and Grade, Foundation, Columns or Post
2. Floor Framing, Floor Overhang, Height of Floors
3. Roof Framing, Overhand of Eaves

**BUILDING OFFICIALS INSPECTION REPORT**

Date	Reports	Initial



---

THE ABOVE BUILDING HAS BEEN INSPECTED AND FOUND TO BE SAFE FOR CONTINUED OCCUPANCY AND IS THEREFORE RECOMMENDED FOR ISSUANCE OF A

CERTIFICATE OF OCCUPANCY

---

CHIEF, ENFORCEMENT DIVISION

FEE P \_\_\_\_\_

O.R. NO. \_\_\_\_\_

DATE \_\_\_\_\_

**MPW FORM NO. 77-013-B**

REPUBLIC OF THE PHILIPPINES  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

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DISTRICT/CITY/MUNICIPALITY

CERTIFICATE OF OCCUPANCY  
For building occupied prior to PD 1096

NO. \_\_\_\_\_

DATE ISSUED \_\_\_\_\_

This certifies that the \_\_\_\_\_ owned by \_\_\_\_\_ which was constructed and actually occupied before the effectivity of the NATIONAL BUILDING CODE (PD 1096) has been inspected and, as can be ascertained, found to be in safe condition, and the electrical, mechanical and/or sanitary facilities are in order.

The owner shall continue to maintain this building, to enhance its architectural well-being, structural stability and fire protective properties, and shall not use this building or any portion of it for purposes other than its intended use as stated above.

This certificate is issued to legalize the occupancy of this building.

---

BUILDING OFFICIAL

NOTE:

This "CERTIFICATE OF OCCUPANCY" shall be posted conspicuously within the premises of the building and shall not be removed without authority from the BUILDING OFFICIAL.

The official number assigned to the building is \_\_\_\_\_

**MPW Form No. 77-014-B**

Republic of the Philippines  
Ministry of Public Works  
OFFICE OF THE BUILDING OFFICIAL

Bldg. Permit Application No. \_\_\_\_\_ Excav. & Ground Prep. Permit No. \_\_\_\_\_  
District/City/Municipality \_\_\_\_\_  
Area Code \_\_\_\_\_

\_\_\_\_\_  
Date Applied

\_\_\_\_\_  
Date Issued

EXCAVATION & GROUND PREPARATION PERMIT

Permit is hereby granted to \_\_\_\_\_  
(Owner/Applicant)  
for the excavation and ground preparation of his/her site located at \_\_\_\_\_  
\_\_\_\_\_ for the construction of his/her proposed  
\_\_\_\_\_ building/structure for which a Building  
(Use of Type of Occupancy)

Permit has been applied for in this Office, subject to the following conditions:

1. This permit does not guarantee the subsequent granting of the principal building permit under process and that the owner/applicant undertakes the work or project at his/her own risk.
2. This permit and the logbook shall be kept at the jobsite at all times for the duration of the project.

3. All public facilities and utilities such as streets, sidewalks, curbs, gutters, electric, electric posts, power and communication lines, water, sewer and drainage lines and the like shall be properly protected against any damage and obstruction. Any facility and/or utility damaged shall be properly repaired and restored to its original condition by the owner/applicant subject to the approval of the Building Official and the proper authorities concerned.
4. The owner and contractor shall be jointly responsible for the safety, protection, security and convenience of the general public and his/her personnel, third parties, the works, equipment, installation and the like. All wastes or discarded materials from the project shall be properly stored and disposed of. Water wastes shall be discharged directly into drainage lines. Pertinent provisions of the National Building Code (P.D. 1096) shall be complied with.
5. This permit may be considered or revoked pursuant to Sections 305 and 306 of the National Building Code (P.D. 1096).

Verified as to the following requirements.

Land Use and Zoning	Line and Grade	Court, Yard, Parking Space
---------------------	----------------	----------------------------

\_\_\_\_\_  
Building Official

**MPW Form No. 77-015-B**

Republic of the Philippines  
Ministry of Public Works  
OFFICE OF THE BUILDING OFFICIAL

Permit No. \_\_\_\_\_

_____ District/City/Municipality	_____ Date Issued
Area Code _____	

**SIDEWALK CONSTRUCTION PERMIT**

Permit is hereby granted to \_\_\_\_\_  
with postal address at \_\_\_\_\_  
for the construction/repair of \_\_\_\_\_ square meters of sidewalk  
at the premises of \_\_\_\_\_ at \_\_\_\_\_ pursuant  
to pertinent provisions of the National Building Code (P.D. 1096) and its Implementing Rules and Regulations  
and to the following conditions.

1. The owner and contractor shall be jointly responsible for the safety, protection, security and convenience of the general public and his/her personnel, third parties, the works, equipment, installation and the like.
2. The lines and grades indicated in the attached sketch and established by this Office shall be strictly followed.
3. The sidewalk and all accessories there to such as driveways, curbs and gutters and the like shall be constructed in conformity with the design and specification of the proper authorities and subject to the approval of the Building Official. The radius of curves of sidewalks in street intersections shall not be less than the width of the wider sidewalk at said intersection.

4. The catch basins or inlets which may be affected by the project shall be re-adjusted and/or relocated by the proper authority at the expense of the owner/applicant of the project.

5. Absolutely no letterings, signs or makings of any kind except those duly authorized for official purposes only shall be placed, printed on or embedded in the pvements of public streets anf sidewalks.

6. The works shall be done under the supervision of a representative from this Office.

7. This permit must be kept at the jobsite at all times for the duration of the project. It may be cancelled or revoked pursuant to Sections 305 and 306 of the National Building Code (P.D. 1096) and when public interest so demands.

Fee: \_\_\_\_\_

O.R. No. \_\_\_\_\_

Issued: \_\_\_\_\_

Line & Grade Fee \_\_\_\_\_

O.R. No. \_\_\_\_\_

Issued: \_\_\_\_\_

\_\_\_\_\_  
Building Official

**IMPORTANT: NOTIFY THIS OFFICE AT LEAST 24 HOURS BEFORE POURING OF CONCRETE.**

**MPW Form No. 77-016-B**

Republic of the Philippines  
Ministry of Public Works  
OFFICE OF THE BUILDING OFFICIAL

Permit No. \_\_\_\_\_

\_\_\_\_\_  
District/City/Municipality

\_\_\_\_\_  
Date Issued

Area Code \_\_\_\_\_

**SIGN PERMIT**

permfit is hereby granted to \_\_\_\_\_  
with postal address at \_\_\_\_\_  
to install/attach/paint \_\_\_\_\_

with the wordings: " \_\_\_\_\_

at the premises of \_\_\_\_\_  
as per attached sketch or location plan pursuant to pertinent provisions of the National Building Code (P.D. 1096) and its Implementing Rules and Regulations and to the following conditions:

1. The sign shall be installed in conformity with Rule V of the Implementing Rules and Regulations of P.D. 1096.
2. In case of electric or neon signs, the corresponding electrical permit therefor shall be secured.
3. This permit must be kept in the premises of the establishment wherein the sign is installed for inspection purposes. It may be cancelled or revoked pursuant to Sections 305 and 306 of the National Building Code (P.D. 1096) and when public interest so demands.

With sketch of location

Date: \_\_\_\_\_

Fee: \_\_\_\_\_

O.R. No. \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Building Official

**MPW Form No. 77-017-B**

Republic of the Philippines  
Ministry of Public Works  
OFFICE OF THE BUILDING OFFICIAL

Permit No. \_\_\_\_\_

\_\_\_\_\_  
District/City/Municipality

\_\_\_\_\_  
Date Issued

Area Code \_\_\_\_\_

**SCAFFOLDING PERMIT**

(For the erection of scaffolding occupying street lines)

Permit is hereby granted to \_\_\_\_\_  
with postal address at \_\_\_\_\_ to erect a  
SCAFFOLDING for \_\_\_\_\_  
with a frontage of \_\_\_\_\_ lineal meters at the premises of \_\_\_\_\_  
\_\_\_\_\_ for a period of thirty (30) days inclusive  
from \_\_\_\_\_, 19 \_\_\_\_ to \_\_\_\_\_, 19 \_\_\_\_ pursuant to  
pertinent provisions of the National Building Code (P.D. 1096) and its Implementing Rules and  
Regulations and to the following conditions:

1. The owner and contractor shall be jointly responsible for the safety, protection, security and convenience of the general public and his/her personnel, third parties, the works, equipment, installation and the like.

2. The scaffolding shall not be erected on the roadway area nor shall it obstruct the free passage of pedestrians.
3. Surface drains and other utility fixtures or lines shall not be obstructed.
4. This permit must be kept at the jobsite at all times for the duration of the project. It may be cancelled or revoked pursuant to Section 305 and 306 of the National Building Code (P.D. 1096) or when public interest so demands.

Fee: \_\_\_\_\_  
 O.R. No. \_\_\_\_\_  
 Date: \_\_\_\_\_

\_\_\_\_\_  
 Building Official

**MPW Form No. 77-018-B**

Republic of the Philippines  
 Ministry of Public Works  
 OFFICE OF THE BUILDING OFFICIAL

Permit No. \_\_\_\_\_ Sidewalk Permit No. \_\_\_\_\_

District/City/Municipality

Area Code \_\_\_\_\_

\_\_\_\_\_  
 Date Issued

\_\_\_\_\_  
 Date Issued

**TEMPORARY SIDEWALK  
 ENCLOSURE AND OCCUPANCY PERMIT**

Permit is hereby granted to \_\_\_\_\_ with postal address at \_\_\_\_\_ for the enclosure and the occupancy of the sidewalk with a frontage of \_\_\_\_\_ ( ) meters and a width of \_\_\_\_\_ ( ) meters or \_\_\_\_\_ square meters as indicated at the back hereof at the premises of \_\_\_\_\_ for the storage of construction materials for a period of \_\_\_\_\_ ( ) days inclusive from \_\_\_\_\_, 19 \_\_\_\_\_ to \_\_\_\_\_, 19 \_\_\_\_\_ pursuant to pertinent provisions of the National Building Code (P.D. 1096) and its implementing rules and regulations, subject, further, to the following conditions:

1. The owner and contractor shall be solely responsible for the safety, protection, security and convenience of the general public and his/her personnel, third parties, the works, equipment, installation and the like.

2. No enclosures shall be made without first providing the required temporary sidewalk plank which shall be properly maintained at all times.
3. The enclosure shall be made of wooden T & G, Gauge 26 corrugated G.I., or any other similar materials at least two meters (2.00 M) high, structurally sound and luminously painted for the safety and convenience of pedestrians. The width of the sidewalk to be occupied shall be as indicated at the back of this permit. The horizontal length of the enclosure and plank shall not extend beyond the affected area of the project.
4. No commercial sign whatsoever shall be painted on, attached to or displayed at the sidewalk enclosure.
5. This permit must be kept at the jobsite at all times for the duration of the projects. It may be cancelled or revoked pursuant to Sections 305 and 306 of the National Building Code (P.D. 1096) or when public interest so demands.

Fee: \_\_\_\_\_  
 O.R. No. \_\_\_\_\_  
 Date: \_\_\_\_\_

\_\_\_\_\_  
 Building Official

**MPW Form No. 77-020-B**

Republic of the Philippines  
 Ministry of Public Works  
 OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
 District/City/Municipality

NOTICE OF VIOLATION  
 \_\_\_\_\_ Notice

\_\_\_\_\_  
 Date Issued

\_\_\_\_\_  
 \_\_\_\_\_  
 Sir/Madam:

Please be informed that an inspection conducted by this Office on \_\_\_\_\_ of your building/structure/construction and premises located at \_\_\_\_\_ Date Issued \_\_\_\_\_ reveals the following violation/s of the National Building Code (P.D. 1096) and its implementing rules and regulations.

- Failure to post or display the Certificate of Occupancy at a conspicuous place on the premises of the building.
- Non-compliance with work stoppage order for alteration/addition/conversion/ repair without permit.
- Use or occupancy without Certificate of Occupancy.

Change in existing use or occupancy without Certificate of Change of Occupancy.

Unauthorized change in type of construction from more fire-resistive to less fire-resistive.

Non-compliance with order to abate or demolish.

Non-compliance with work stoppage order for construction without permit.

You (or your representative) contact this Office within three (3) days from receipt hereof. Failure to do so shall be cause for this Office to institute appropriate action against you.

\_\_\_\_\_  
Building Official

Received by:

\_\_\_\_\_  
Owner/Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Served by

**MPW Form No. 77-021-B**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

DISTRICT/CITY/MUNICIPALITY  
ARE CODE \_\_\_\_\_

T O : CHIEF OF LOCAL FIRE SERVICE  
\_\_\_\_\_

SUBJECT : APPLICATION FOR BUILDING PERMIT

Pursuant to the provisions of the Memorandum of Agreement between the Ministry of National Defense and the Ministry of Public Works, Transportation and Communications, dated August 1, 1978, I have the honor to endorse to you one (1) set of plans and specifications for \_\_\_\_\_  
\_\_\_\_\_ building to be constructed \_\_\_\_\_  
\_\_\_\_\_ for your  
evaluation, review and/or recommendations with respect to fire safety and control requirements.

Quoted hereunder is the pertinent provision of said Memorandum of Agreement:

"Upon receipt of the application for Building Permit, the Building Official shall refer one (1) set of the plans and specifications to the chief of the Local Fire Service (CLFS) for his evaluation, review and/or recommendation with respect to fire safety and control requirements. The CLFS shall submit his report and recommendations to the Building Official within five (5) working days from date of referral. Failure of the CLFS to act within said period shall mean that the plans and specifications submitted conform with all the requirements of the FCP".

It is understood that your report and recommendations shall be submitted to this Office within five (5) days from receipt hereof.

\_\_\_\_\_  
Building Official

Date transmitted to CLFS : \_\_\_\_\_

Date received by CLFS : \_\_\_\_\_

Date returned to Building Official: \_\_\_\_\_

Date received to Building Official: \_\_\_\_\_

**MPW Form No. 77-022-B**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

DISTRICT/CITY/MUNICIPALITY  
ARE CODE \_\_\_\_\_

T O : CHIEF OF LOCAL FIRE SERVICE  
  
\_\_\_\_\_

SUBJECT : COMPLETION OF CONSTRUCTION

Pursuant to the Memorandum of Agreement between the Ministry of National Defense and the Ministry of Public Works, Transportation and Communications, dated August 1, 1978, please conduct a

final inspection of the building owned by \_\_\_\_\_  
located at \_\_\_\_\_

for fire safety and control requirements.

In accordance with the provisions of said Memorandum of Agreement you are required to submit to this Office the Fire Safety Inspection Certificate within five (5) working days from receipt of this notification. Provided, that in case of non-issuance, suspension or revocation of said certificate of fire safety inspection, the reasons or grounds therefore shall be stated by you in writing.

\_\_\_\_\_  
Building Official

Date transmitted to CLFS : \_\_\_\_\_

Date received by CLFS : \_\_\_\_\_

**MPW Form No. 77-023-B**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

DISTRICT/CITY/MUNICIPALITY  
ARE CODE \_\_\_\_\_

T O : CHIEF OF LOCAL FIRE SERVICE  
\_\_\_\_\_

SUBJECT : BUILDING PERMIT ISSUED

Attached hereto is a copy of the Building Permit No. \_\_\_\_\_ issued to  
\_\_\_\_\_ on \_\_\_\_\_  
for the construction/addition/alteration/repair of his \_\_\_\_\_

\_\_\_\_\_ building located \_\_\_\_\_  
\_\_\_\_\_.

In accordance with the Memorandum of Agreement between the Ministry of National Defense and the Ministry of Public Works, Transportation and Communications, dated August 1, 1978, you are

"undertake the necessary inspection of the building during its construction in accordance with the CLFS and its Implementing Rules and Regulations. The results and frequency of these inspections shall be duly entered into the Construction Logbook Sheet and the same shall be reported in writing to the Building Official for appropriate action".

\_\_\_\_\_  
Building Official

Date transmitted to CLFS : \_\_\_\_\_

Date received by CLFS : \_\_\_\_\_

**MPW Form No. 77-024-B**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

DISTRICT/CITY/MUNICIPALITY  
\_\_\_\_\_

\_\_\_\_\_

Sir / Madam :

\_\_\_\_\_ Your sign, which was installed/erected before the promulgation of Rule V of the Implementing Rules and Regulations of the National Building Code (P.D. 1096), although covered by a permit, has been found to be non-conforming to the new rules. You are given a grace period of:

\_\_\_\_\_ for Neon signs, 12 months

\_\_\_\_\_ for all other signs, 6 months

from receipt of this notice to conform to the rule.

For more particulars, please contact this Office.

Your existing sign was installed erected without any permit from this Office. However, it has been found to conform to the provisions of Rule V of the Implementing Rules and Regulations of the National Building Code (P.D. 1096).

The sign shall be allowed to remain provided you obtain a validating permit from this Office within thirty (30) days from receipt of this Notice.

Your existing sign was installed/erected without any permit from this Office. Furthermore, it does not conform to the provisions of Rule V of the Implementing Rules and Regulations of the national Building Code (P.D. 1096).

The sign shall be altered to conform to the said Rule. Please secure a Sign Permit from this Office not later than sixty (60) days from receipt of this Notice.

Your existing sign has been found to be in dilapidated condition and is unsafe / an eyesore. Under the provisions of Rule V of the Implementing Rules and Regulations of the National Building Code (PD 1096) you are required to restore your sign to a safe and satisfactory condition immediately upon receipt of this Notices. Obtain a Sign Permit for the restoration of your sign.

For non-compliance with this Notice, this Office may restore the sign at your expense.

\_\_\_\_\_  
Building Official

Served by : \_\_\_\_\_  
Received : \_\_\_\_\_  
Date : \_\_\_\_\_

**MPW Form No. 77-002-E**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
DISTRICT/CITY/MUNICIPALITY

Meter No. \_\_\_\_\_ No. \_\_\_\_\_

Electrical Division  
CONDEMNED INSTALLATION NOTICE

Type of Occupancy \_\_\_\_\_, 19 \_\_\_\_ Owner  
of Building \_\_\_\_\_ Occupant \_\_\_\_\_

THIS IS TO CERTIFY that an inspection has been made in accordance with the provisions of the "National Building Code of the Philippines" (PD 1096) of the electrical installation and equipment enumerated hereunder installed in your Building located at \_\_\_\_\_

\_\_\_\_\_  
L O A D

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LIGHTS

SWITCHES

CONVENIENCE OUTLET

Motors \_\_\_\_\_

Other Load \_\_\_\_\_

You are hereby notified that the electrical installation is CONDEMNED and the electrical defects must be properly corrected under the supervision of a duly licensed Professional Electrical Engineering under a wiring Permit issued by this Office within ten (10) days from receipt of this notice. Failure to do shall be cause for this Office to recommend or the DISCONNECTION of your service mains and initiate legal action against you.

Inspection Fee P\_\_\_\_\_

This notice must be presented to the Office of the Building Official within ten (10) days for payment of the above mentioned fee.

\_\_\_\_\_  
Building Official

Received:

\_\_\_\_\_  
(Owner)

\_\_\_\_\_  
(Date)

**MPW Form No. 77-003-E**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
DISTRICT/CITY/MUNICIPALITY

Electrical Division/Section

NOTICE OF ILLEGAL INSTALLATION

\_\_\_\_\_  
Notice

\_\_\_\_\_  
Date

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sir/Madam:

This is to inform you that you have made an illegal electrical installation/connection in violation of the provisions of the "National Building Code" (P.D. 1096) and its implementing rules and regulations, Immediate compliance with the following is advised:

Stop immediately all illegal installations in your building and/or premises.

You or your representative contact this Office within three (3) days from receipt hereof.

\_\_\_\_\_  
\_\_\_\_\_

Failure to comply with this notice shall be cause for this Office to institute proper legal action against you.

\_\_\_\_\_  
Building Official

Received:

\_\_\_\_\_  
(Owner)

\_\_\_\_\_  
(Date)

**MPW Form No. 77-004-E**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
DISTRICT/CITY/MUNICIPALITY

ELECTRICAL DIVISION

PERMIT FOR TEMPORARY SERVICE CONNECTION

O. R. No. \_\_\_\_\_ Permit No. \_\_\_\_\_  
\_\_\_\_\_, 19 \_\_\_\_\_  
Date

NAME OF APPLICANT (Last Name, First Name, M.I.)

T.A.N.

Address (No. Street, Barangay, City/Municipality)

Tel. No.

Location of Installation (No. Street, Barangay)

Number of Outlets: Lights \_\_\_\_\_ Switches \_\_\_\_\_  
Others \_\_\_\_\_

Nature of Work: \_\_\_\_\_

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Owner/Applicant	Electrical Engineer/Master Electrician
Res. Cert. No. A. _____	P.R.C. Reg. No. _____
Issued at _____	P.T.R. _____
Date Issued _____	Res. Cert. No. _____
T.A.N. _____	Issued at _____
Date Issued _____	
T.A.N. _____	

PERMIT is hereby granted to connect the electrical installation with the authorized load specified hereunder located at \_\_\_\_\_ for a period of \_\_\_\_\_ days from date \_\_\_\_\_ after which period the service shall be disconnected.

This permit shall be suspended or revoked any time before its expiration whenever alterations or change in the wiring system have rendered it unsafe.

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

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DISTRICT/CITY/MUNICIPALITY  
Area Code \_\_\_\_\_

CERTIFICATE OF COMPLETION  
ELECTRICAL WORKS

This is to certify that the electrical installations/works of the building covered by Building Permit No. \_\_\_\_\_ issued on \_\_\_\_\_ has been completed in accordance with the approved plans and specifications on file with the Office of the Building Official and the National Building Code (P.D. 1096). That the said installations/works is ready for final inspection.

NAME OF OWNER: \_\_\_\_\_  
                            LAST NAME                      GIVEN NAME                      MIDDLE INITIAL  
ADDRESS OF OWNER: \_\_\_\_\_  
LOCATION OF CONSTRUCTION: \_\_\_\_\_  
USE OR TYPE OF OCCUPANCY: \_\_\_\_\_  
DATE OF START OF CONSTRUCTION: \_\_\_\_\_

DATE

OF

COMPLETION:

\_\_\_\_\_

TOTAL NUMBER OF OUTLETS AND EQUIPMENT INSTALLED

LIGHTS \_\_\_\_\_ SWITCHES \_\_\_\_\_ CONVENIENCE OUTLETS \_\_\_\_\_  
 BELL SYSTEM \_\_\_\_\_ ELECTRICAL RANGE \_\_\_\_\_ KW \_\_\_\_\_ WATER HEATER \_\_\_\_\_ KW  
 AIR CONDITIONING SYSTEM \_\_\_\_\_ HP \_\_\_\_\_ TELEPHONE \_\_\_\_\_ MOTORS \_\_\_\_\_ HP \_\_\_\_\_  
 OTHERS \_\_\_\_\_ (specify)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

In-charge of construction

If construction is undertaken by contract

\_\_\_\_\_  
 ELECTRICAL ENGINEERING/MASTER ELECTRICIAN                      CONTRACTOR

P.R.C. Reg. No. \_\_\_\_\_ Date \_\_\_\_\_ P.R.C. Reg. No. \_\_\_\_\_ Class \_\_\_\_\_  
 TAN \_\_\_\_\_ Res. Cert. \_\_\_\_\_ Date \_\_\_\_\_ TAN \_\_\_\_\_ Res. Cert. \_\_\_\_\_ Date \_\_\_\_\_  
 Address \_\_\_\_\_ Address \_\_\_\_\_

Conforme

\_\_\_\_\_  
OWNER/APPLICANT

(For statistical purposes only)

NUMBER OF STORIES \_\_\_\_\_  
 ESTIMATED COST \_\_\_\_\_  
 ACTUAL COST \_\_\_\_\_

a) Materials (Total Cost) P

- 1. Electrical wires \_\_\_\_\_
  - 2. Lighting outlets \_\_\_\_\_
  - 3. Convenience outlets \_\_\_\_\_
  - 4. Switches \_\_\_\_\_
  - Others (specify) \_\_\_\_\_
- \_\_\_\_\_

b) Other costs \_\_\_\_\_

This includes professional fees, permits and other fees.

Master Electricians can sign for electrical installation up to 20 outlets or up to 4kw.

WORK SHEET  
III. ELECTRICAL SECTION

1. Loads to be Connected:

Convenience outlets _____	Communication _____
Switches _____	Light _____
Bell System _____	Others (specify) _____
Elec. range _____	_____
Generator _____	_____

2. Nature of Works: \_\_\_\_\_

3. Type of Service: Voltage \_\_\_\_\_ Size of Wire \_\_\_\_\_ Phone \_\_\_\_\_

4. Remarks: \_\_\_\_\_  
\_\_\_\_\_

I hereby certify that the above data and information are true and correct to the best of my knowledge and belief.

---

Electrical Engineer/Master Electrician

ELECTRICAL FESS      Computed by: \_\_\_\_\_

P.T.C. No. \_\_\_\_\_

P.T.R. No. \_\_\_\_\_ TAN \_\_\_\_\_

Address \_\_\_\_\_

Res. Certificate A - \_\_\_\_\_

Surcharge P _____	Issued At _____
Total P _____	Date Issued _____

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LOAD

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\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Nature of Work \_\_\_\_\_

Contractor \_\_\_\_\_

Inspector \_\_\_\_\_

Owner/Occupant \_\_\_\_\_

Fee: P \_\_\_\_\_

Paid under Official Receipt No. \_\_\_\_\_

Date \_\_\_\_\_, 19 \_\_\_\_\_

Recommending Approval:

\_\_\_\_\_  
Electrical Engineer

\_\_\_\_\_  
Building Official

NOTE:

Renewals or extension of this permit and/or final certification of the electrical installation are subject to inspection and payment of corresponding fee in conformity with pertinent provisions of the "National Building Code" (P.D. 1096) and its implementing rules and regulations.

**MPW Form No. 77-008-E**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

\_\_\_\_\_  
District/City/Municipality

Mechanical Division/Section  
NOTICE OF ILLEGAL INSTALLATION/OPERATION

Notice \_\_\_\_\_

\_\_\_\_\_  
Date Issued

\_\_\_\_\_  
\_\_\_\_\_

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Sir/Madam:

This is to inform you that you have made an illegal Mechanical Installation/Operation in violation of the provisions of the "National Building Code" (P.D. 1096) and its implementing rules and regulations. Immediate compliance with the following is advised:

Stop immediately all illegal mechanical installation/operation in your building and/or premises.

You or your representative contact this Office within three (3) days from receipt.

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Failure to comply with this notice shall be cause for his Office to institute proper legal action against you.

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Building Official

Received: \_\_\_\_\_

Owner

Date: \_\_\_\_\_

**MPW Form No. 77-009-E**

Republic of the Philippines  
MINISTRY OF PUBLIC WORKS  
OFFICE OF THE BUILDING OFFICIAL

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District/City/Municipality

MECHANICAL DIVISION/SECTION  
CONDEMNED INSTALLATION NOTICE

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Date

Type of Occupancy \_\_\_\_\_ Occupant \_\_\_\_\_

Type of Building \_\_\_\_\_ Machine Installed \_\_\_\_\_

This is to certify that an inspection has been made in accordance with the provisions of the "National Building Code of the Philippines" (P.D. 1096) of the mechanical installation and equipment enumerated hereunder installed/located at \_\_\_\_\_.

You are hereby notified that the mechanical installation is condemned and the mechanical defects must be properly corrected under the supervision of a duly licensed Professional Mechanical Engineer/Mechanical Engineer under a Mechanical Permit issued by this Office within ten (10) days from receipt of this notice. Failure to do shall be cause for his Office to recommend the removal of your mechanical equipment and initiate legal actions against you.

Inspection Fee, P\_\_\_\_\_

This notice must be presented to the building official within ten (10) days for payment of the above-mentioned fee.

\_\_\_\_\_

Building Official

Received: \_\_\_\_\_

Owner

Date: \_\_\_\_\_

**THE LAW TO ENHANCE MOBILITY  
OF DISABLED PERSONS**

BATAS PAMBANSA BLG. 344

**AN ACT TO ENHANCE THE MOBILITY OF DISABLED PERSONS BY REQUIRING CERTAIN BUILDINGS; INSTITUTIONS, ESTABLISHMENTS, AND PUBLIC UTILITIES TO INSTALL FACILITIES AND OTHER SERVICES.**

*Be it enacted by the Batasang Pambansa in session assembled:*

Section 1. In order to promote the realization of the rights of disabled persons to apticipate fully in the social life and the development of the societies in which they live and enjoyment of the opportunities available to other citizens, no license or permit for the construction, repair or renovation of public and private buildings for public use, educational institutions, airports, sports and recreation centers and complexes, shopping centers or establishments, public parking places, workplaces, public utilities, shall be granted or issued unless the owner or operator thereof shall install and incorporate in such building, establishment, institution or public utility, such architectural facilities or structural features as shall reasonably enhance the mobility of disabled persons such as sidewalks, ramps, railings and the life. If feasible, all such existing buildings, institutions, establishments, or public utilities may be renovated or altered to enable the disabled persons to have access to them: *Provided, however,* That buildings,

institutions, establishments, or public utilities to be constructed or established for which licenses or permits had already been issued may comply with the requirements of this law: *Provided, further,* That in case of government buildings, streets and highways, the Ministry of Public Works and Highways shall see to it that the same shall be provided with architectural facilities or structural features for disabled persons.

In the case of the parking place of any of the above institutions, buildings, or establishments, or public utilities, the owner or operator shall reserve sufficient and suitable space for the use of disabled persons.

Sec. 2. In case of public conveyance, devices such as the prominent display of posters or stickers shall be used to generate public awareness of the rights of the disabled and foster understanding of their special needs. Special bus stops shall be designed for disabled persons. Discriminating against disabled persons in the carriage or transportation of passengers is hereby declared unlawful.

Sec. 3. The Minister of Public Works and Highways and the Minister of Transportation and Communications, in coordination with the National Commission Concerning Disabled Persons, shall prepare the necessary rules and regulations to implement the provisions of this Act.

Sec. 4. Any person violating any provision of this Act or of the rules and regulations promulgated hereunder shall, upon conviction by a court of competent jurisdiction, suffer the penalty of imprisonment of not less than one month but not more than one year or a fine of P2,000 to P5,000 or both, at the discretion of the court: *Provided,* That in the case of corporations, partnerships, cooperatives or associations, the president, manager or administrator, or the person who has charge of the construction, repair or renovation of the building, space or utilities shall be criminally responsible for any violation of this Act and/or rules and regulations promulgated pursuant thereto.

Sec. 5. All laws, executive and administrative orders, rules and regulations inconsistent with the foregoing provisions are hereby replaced or amended accordingly.

Sec. 6. This Act shall take effect upon its approval.

Approved: February 25, 1983.

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## **MPWH Instructions on BP 344**

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**MINISTRY OF PUBLIC WORKS AND HIGHWAYS**

May 1985

MINISTRY ORDER

No. 14

SERIES OF 1985

y - - - - - x

SUBJECT: IMPLEMENTATION OF  
BATAS PAMBANSA BLG. 344

TO: All Regional Directors, District City/Municipal Engineers/Building Officials,  
the BRDS and all concerned.

Batas Pambansa Blg. 344, An Act to Enhance the Mobility of Disabled Persons by Requiring Certain Buildings, Institutions, Establishments and Public Utilities to Install Facilities and other Devices, which was signed by the President last February 25, 1983, is now in full force 30 days after the publication of its Implementing Rules and Regulations in the Official Gazette last September 3, 1984.

XXXXXXXXXX

Pursuant to said law, no building permit shall be issued for the construction, repair or renovation of public and private buildings for public use, educational institutions, airports, sports and recreational centers and complexes, shopping centers or establishments and parking spaces and such other places as classified in the Implementing Rules and Regulations (IRR) unless the owner thereof shall install and incorporate in such building, establishment or institution such architectural facilities or structural features as shall reasonably enhance the mobility of disabled persons such as sidewalks, ramps, railings and such other devices as provided in the IRR. In case of streets and highways, same shall be provided with such facilities or features for disabled persons also as described and provided in the same IRR.

The Manpower Development Service with the technical assistance of the Building Research and Development Staff (BRDS) shall conduct a continuing information campaign to acquaint all enforcing officers and attached agencies of this Ministry on the provisions of said law.

Said offices shall coordinate with the National Commission Concerning Disabled Persons (NCCDP) and in consonance with the attached National Plan of Action for CY 1985 on the implementation of B.P. Blg. 344.

For compliance.

(Sgd.) JESUS S. HIPOLITO  
Minister

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**Amended Rules and Regulations Implementing  
the Law to Enhance Mobility of Disabled Persons**

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REPUBLIC OF THE PHILIPPINES  
OFFICE THE PRESIDENT  
NATIONAL COMMISSION CONCERNING DISABLED PERSONS

IMPLEMENTING RULES AND REGULATIONS OF BATAS PAMBANSA BILANG 344 - "AN  
ACT TO ENHANCE THE MOBILITY OF DISABLED PERSONS BY REQUIRING CERTAIN

# BUILDINGS, INSTITUTIONS, ESTABLISHMENTS, AND PUBLIC UTILITIES TO INSTALL FACILITIES AND OTHER DEVICES"

## RULE I - SCOPE AND APPLICATION

### 1. *Purpose:*

The Rules and Regulations set forth herein provide for minimum requirements and standards to make buildings, facilities and utilities for public use accessible to disabled persons, pursuant to the objectives of Batas Pambansa Bilang 344, "An Act to Enhance the Mobility of disabled Persons by Requiring Certain Buildings, Institutions, Establishments and Public Utilities to Install Facilities and Other Devices".

### 2. *Definition of Terms:*

For the purpose of these Rules and Regulations, the words, terms and phrases enumerated in Annex "A" hereof shall have the meaning as provided therein.

### 3. *Scope:*

The provisions of these Rules and Regulations shall apply to the following -

3.1 Public and private buildings and related structures for public use and which shall be constructed, repaired or renovated.

3.2 Streets and highways and public utilities

3.2.1 Streets and highways 3.2.2 Public transport vehicles which shall include:

- a) Passenger buses
- b) Passenger trains, including those of the Light Rail Transit Authority (LRTA)
- c) Passenger boats and ships.
- d) Passenger airplanes

3.2.3 Public Telephones

3.3 Public transport terminals including those of LRTA

### 4. *Application:*

4.1 Public and private buildings and related structures for public use. No permit for the construction, repair or renovation of public and private buildings and related structures for public use, whether owned or leased, shall be granted or issued, unless the owner thereof shall have provided in the plans and specifications submitted for approval barrier-free facilities and accessibility features as provided in these Rules and in accordance with the following criteria -

#### 4.1.1 Buildings and related structures to be constructed -

- a) At the space where the primary function is served and where facilities and ingress/egress of the building or structure are located, as to make such space accessible to the disabled persons; provided, however, that where the primary function can be served at the ingress level is provided with facilities, requirements for accessibility at other levels may be waived.
- b) Ten percent (10%) of the total number of units of government-owned living accommodations shall be accessible and fully usable by the disabled persons with any fractional part in excess of one-half (1/2) in the computation thereof, to be considered as one unit; for privately-owned living accommodations the number of accessible units shall be as provided in Section 3 of Rules II hereof.
- c) Ingress/egress from the street to the building or structure shall be made accessible.
- d) Accessible slots in parking areas shall be located as near as possible to ingress/egress spaces of the building or structure.

#### 4.1.2 Buildings and related structures to be repaired or renovated including those proposed for a change of occupancy -

If possible, barrier-free facilities and accessibility features shall be provided in accordance with the requirements under Sub-section 4.1.1 (a), (c) and (d): feasibility of incorporation of barrier-free facilities and accessibility features shall be determined from all the following conditions:

- a) When the repair or renovation work is to be done in the space where the primary function is served;
- b) When the facilities can be made accessible at any other level which is accessible by means of an elevator with a minimum width of 800 mm;
- c) When the space allotted for the primary function will not be diminished by more than ten percent (10%) of its original area;
- d) When the capacity or strength of any major structural component, such as slabs, beams, guiders, columns, bearing walls and footings of the building or structure will not be diminished;
- e) When the cost (exclusive of the exception provided below) of such repair or renovation work is in excess of twenty percent (20%) of the total cost of the building or structure, based upon the computation of permit fees as provided under Rule III of the Implementing Rules and Regulations promulgated. Pursuant to P.D. 1096 entitled: "The National Building Code of the Philippines";

- f) When there is no legal constraint which would not allow compliance with these regulations:

EXCEPTION: Repair or renovation work which consists only of heating, ventilating and airconditioning systems, including those which may be required only with respect to fire, panic and explosion safety for existing spaces, shall not be subject to the requirements for barrier-free facilities and accessibility features.

#### 4.1.3 Streets, highways and transport related structures to be constructed -

Streets, highways and transport related structures shall be provided with the following barrier-free facilities and accessibility features at every pedestrian crossing: ramps and other accessible features in buildings of the sectoral offices and attached agencies of DOTC; transportation terminals and passenger waiting areas for use of disabled persons;

- a) Cut-out curbs and accessible ramps at the sidewalks.
- b) Audio-visual aids for crossing

EXCEPTION: Requirements for accessibility at pedestrian grade separations or overpasses and underpasses may be waived.

#### 4.1.4 Existing streets and highways to be repaired and renovated -

The accessibility requirements under Sub-section 4.2.1 shall be provided where the portion of existing street and highways to be repaired or renovated includes part or the entire pedestrian crossing.

#### 4.2.1 Transport vehicles for public use -

- a) No license or franchise for the operation of public buses, passenger boats, ships and domestic airplanes shall be granted or issued unless the owner or operator thereof shall have provided and designated the number of seats and shall have placed audio-visual aids required by Sections 5 & 8 of Rule IV for the disabled persons.
- b) Government instrumentalities operating passenger trains including the Light Rail Transit Authority shall have provided the number of seats for disabled persons required, by Section 5 of Rule IV.
- c) Government instrumentalities operating passenger airplanes shall provide and designate the number of seats for disabled persons and shall likewise place the audio-visual aids required by Sec. 5 of Rule IV.

#### 4.2.2 Existing Public Transport Vehicles -

The minimum accessibility requirements in Section 6.0 of Rule IV shall apply to all existing units of public transport vehicles, and including those units which are to be repaired and renovated.

#### 4.2.3 Public Telephones -

At least one unit of public telephones for every five (5) units shall be accessible to disabled persons and shall be provided with visual aids required under Sec. 2.14 of Rule II, provided that if only one (1) public telephone is to be installed in a particular place the same shall be accessible to disabled persons.

#### 4.2.4 Public Transport Terminals -

The criteria and accessibility requirements, provided for public and private buoldings and related structures for public use under sub-section 4.1 shall apply to public transport terminals.

### 5. Special Standards of Accessibility

Where the requirtements for accesibility in the Rules will create an unreasonable hardship in design/construction, special standards of accessibility through the use of other methods and/or materials shall be allowed if better facilities can be provided subject to the approval of the National Council for the Welfare of Disabled Persons.

## RULE II - MINIMUM REQUIREMENTS FOR ACCESSIBILITY

### 1. Design Criteria:

1.1 CATEGORIES OF DISABLED PERSONS. The categories of disability dictate the varied measures to be adopted in order to create an accessible environment for the handicapped. disabled persons under these Rules may be classified into those who have:

1.1.1 Impairments requiring confinement to wheelchairs; or

1.1.2 Impairments causing difficulty or insecurity in walking or climbing stairs or requiring the use of braces, crutches or other artificial supports; or impairments caused by amputation, arthritis, spastic conditions or pulmonary, cardiac or other illls rendering individuals semi-ambulatory; or

1.1.3 Total or partial impairments of hearing or sight causing insecurity or likelihood of exposure to dnager in public places; or

1.1.4 Impairments due to conditions of aging and incoordination;

1.1.5 Mental impariments whether acquired or congenital in nature.

1.2 ANTHROPOMETICS AND DIMENSIONAL DATA AS GUIDES FOR DESIGN. The minimum and maximum dimensions for spaces in the built environment should consider the following criteria:

1.2.1 The varying sizes and statures of persons of both sexes, their reaches and their lines of sight at both the standing and sitting positions.

These hold for both disabled and non-disabled persons. For purposes of catering to most people, measures to be used are to refer to average-sized persons according to current international literature.

1.2.2 The dimensional data of the technical aids of disabled persons.

Included in the second consideration are the dimensions of wheelchairs; the minimum space needed for locking and unlocking leg braces plus the range of distance of crutches and other walking aids from persons using such devices.

By applying at this very early stage dimensional criteria which take into account wheelchair usage, the physical environment will ultimately encourage and enable wheelchair users to make full use of their physical surroundings.

1.2.3 The provision of adequate space for wheelchair maneuvering generally insures adequate space for disabled persons equipped with other technical aids or accompanied by assistants.

In determining the minimum dimensions for furniture and fixtures accessible to disabled persons, the following anthropometric data shall serve as guides for design.

The length of wheelchairs varies from 1.10 m to 1.30 m. The width of wheelchairs is from 0.60 m to 0.75 m. A cricle of 1.50 m in diameter is a suitable guide in the planning of wheelchair turning spaces.

The comfortable reach of persons confined to wheelchairs is from 0.70 m to 1.20 m above the floor and not less than 0.40 m from room corners. the comfortable clearnace for knee and leg space under tables for wheelchair users is 0.74 m.

Counter heights shall be placed at a level comfortable to disabled persons' reach.

Refer to Annex B - 2 to B - 6, figs. 2 to 8.

1.3 BASIC PHYSICAL PLANNING REQUIREMENTS. No group of people shall be deprived of full participation and enjoyment of the environment or be made unequal with the rest due to any disability. In order to achieve this goal adopted by the United Nations, certain basic principles shall be applied:

- 1.3.1 ACCESSIBILITY. The built environment shall be designed so that it shall be accessible to all people. This means that no criteria shall impede the use of facilities by either the handicapped or non-disabled citizens.
- 1.3.2 REACHABILITY. Provisions shall be adapted and introduced to the physical environment so that as many places or buildings as possible can be reached by all.
- 1.3.3 USABILITY. The built environment shall be designed so that all persons, whether they be disabled or not, may use and enjoy it.
- 1.3.4 ORIENTATION. Finding a person's way inside and outside of a building or open space shall be made easy for everyone.
- 1.3.5 SAFETY. Designing for safety insures that people shall be able to move about with less hazards to life and health.
- 1.3.6 WORKABILITY AND EFFICIENCY. The built environment shall be designed to allow the disabled citizens to participate and contribute to developmental goals.

RULE III - SPECIFIC REQUIREMENTS FOR BUILDINGS  
AND RELATED STRUCTURES  
FOR PUBLIC USE

1. *Classification of Buildings By Use of Occupancy:*

- 1.1 Occupancy classified categories enumerated in Section 701 of the National Building Code (PD 1096) are hereby adapted.
  - 1.1.1 Category I - *Residential* - This shall comprise Group A and partly Group B Buildings.
  - 1.1.2 Category II - *Commercial and Industrial* - This shall comprise partly Groups B, C, E, F, G, H and I Buildings.
  - 1.1.3 Category III - *Educational and Industrial* - This shall comprise partly Groups C, D, E, and H Buildings.
  - 1.1.4 Category IV - *Agricultural* - This shall comprise partly Group J Buildings.
  - 1.1.5 Category V - *Ancillary* - This shall comprise partly Group J Buildings.

2. *Architectural Features and Facilities:*

Where the following features and facilities are architectural design requirements in accordance with generally accepted architectural practice, the same shall in accordance with Rule II, be made accessible/barrier-free and shall include the corresponding graphic signs.

## 2.1 Architectural facilities and features:

- 2.1.1 A - Stairs
- 2.1.2 B - Walkways
- 2.1.3 C - Corridors
- 2.1.4 D - Doors and Entrances
- 2.1.5 E - Washrooms and Toilets
- 2.1.6 F - Lifts/Elevators
- 2.1.7 G - Ramps
- 2.1.8 H - Parking Areas
- 2.1.9 I - Switches, Controls, Buzzers
- 2.1.10 J - Handrails
- 2.1.11 K - Thresholds
- 2.1.12 L - Floor Finishes
- 2.1.13 M - Drinking Fountains
- 2.1.14 N - Public Telephones
- 2.1.15 O - Seating Accommodations

## 3. CATEGORY I

The following requirements shall only apply to government owned buildings.

### 3.1 *Group A*

- 3.1.1 Single detached. Ten percent (10%) of the total units to be constructed.

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, and L.

- 3.1.2 Duplexes: Ten percent (10%) of the total units to be constructed

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, and L

- 3.1.3 School or company staff housing units: One (1) unit for 26 to 50 units to be constructed and 1 additional unit for every 100 units thereafter.

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, and L

### 3.2 *Group B*

- 3.2.1 Multiple dwelling units or high-rise residential condominiums or tenement houses. One (1) unit from 26 up to 50 units to be constructed and an additional unit for every 100 units at ingress level in case there is not barrier-free elevator provided. Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, and M.

## 4. CATEGORY II

The following requirements shall apply to both government and privately-owned buildings.

#### 4.1 *Group B*

- 4.1.1 Accessories, tenement house and/or row houses, apartment houses and/or town houses. One (1) unit for every 50 units up to 150 units and an additional unit for every 100 units thereafter.

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, and L.

- 4.1.2 Hotels, motels, inns, pension houses and/or apartels. One (1) unit for every 50 units up to 150 units and an additional unit for every 100 units of ingress level, in case there is no barrier-free elevators; provided that in all cases, one unit (1) shall be provided at ingress level.

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and N.

- 4.1.3 Private or "off campus" Dormitories: One (1) unit for every 50 units up to 150 units and an additional dwelling unit for every 100 units thereafter at ingress level.

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

#### 4.2 *Group C*

- 4.2.1 Amusement Halls and Parlors

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

- 4.2.2 Massage and Sauna Parlors

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, and M.

#### 4.3 *Group E - 1*

- 4.3.1 Train Stations and Terminals

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

#### 4.3.2 Bus depots and terminals

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

#### 4.3.3 Transportation Office

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

#### 4.3.4 Airport terminal buildings and heliports

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

#### 4.3.5 Ports and harbor facilities, landing piers sheds, ferry landing stations.

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

### 4.4 *Group E - 2*

#### 4.4.1 General wholesale and retail stores

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and N.

#### 4.4.2 Shopping centers and supermarkets and public markets

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and N.

#### 4.4.3 Restaurants, dining and drinking establishments

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

#### 4.4.4 Office Buildings

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and N.

#### 4.4.5 Financial Institutions

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and N.

#### 4.4.6 Funeral parlors, morgues and crematories

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, N, and O.

#### 4.4.7 Memorial and Mortuary Chapels

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, N, and O.

### 4.5 *Group H - I, Group H-4 and Group I*

#### 4.5.1 Theaters, Auditoriums and Convention Halls

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, N, and O.

#### 4.5.2 Concert Halls and Opera Houses

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, N, and O.

#### 4.5.3 Collisea and sports complexes and stadiums

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, N, and O.

### 4.6 *Group F*

#### 4.6.1 Dairies and Creameries

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

#### 4.6.2 Factories and workshops using incombustible or non-explosive materials

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

#### 4.6.3 Breweries, bottling plants, canneries and tanneries

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

### 4.7 *Group G - 3*

#### 4.7.1 Wood working establishments, lumber and timber yards.

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

4.7.2 Pulp, paper and paper board factories

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

4.7.3 Textile and fiber spinning mills

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

4.7.4 Garment and undergarment factories

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, and M.

5. CATEGORY III

5.1 *Group C*

5.1.1 Educational institutions (schools, colleges, universities, vocational schools, seminaries and novitiates), including schools auditoriums, gymnasias, reviewing stands, little theaters and concert halls.

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

5.1.2 Libraries, museums, exhibition halls and art galleries

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, N, and O.

5.1.3 Civil Centers

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and O.

5.1.4 Clubhouses and lodges

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.1.5 Community Centers

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and O.

5.2 *Group D - 1*

5.2.1 Mental hospitals, mental sanitaria, mental asylums.

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and N.

5.2.2 Jails, prisons, reformatories, correctional institutions

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.2.3 Rehabilitation Centers

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.2.4 Leprosaria

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.3 *Group D - 2*

5.3.1 Homes for the Aged

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.3.2 Hospitals and Sanitaria

Barrier-free facilities and features required in A, B, C, D, E, F, G, H, I, J, K, L, M, and N.

5.4. *Group D - 3*

5.4.1 Nursing Homes for ambulatory patients

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.4.2 Orphanages

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.5 *Group E - 7*

5.5.1 Police and fire stations

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and N.

5.6 *Group H*

5.6.1 Churches, temples, chapels and similar places of worship.

Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, L, M, and O.

6. CATEGORY IV

6.1 *Group J - 1*

6.1.1 Agricultural buildings Barrier-free facilities and features required in A, B, C, D, E, G, H, I, J, K, and L.

7. STANDARD OF ACCESSIBILITY FOR SPECIAL TYPE OF FACILITIES

7.1 The provision of this section shall apply to the specified type of facilities and identified specific requirements for accessibility and usability which shall be provided for each of the listed occupancy uses.

7.1.1 Auditoriums, assembly halls, theaters, and related facilities:

- a) Seating for the disabled shall be accessible from the main lobby to primary entrances, together with related toilet facilities.
- b) In all assembly places where seating accommodation is provided, there shall be spaces for the disabled persons as provided.

Seating Capacity	Wheelchair Seating Space
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4 - 5	2
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51 - 300	4
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301 - 500	6
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c) When the seating capacity exceeds 500 an additional wheelchair seating space shall be provided for each total seating capacity increase of 100 seats.

d) Readily removable seats may be installed in these spaces when such spaces are not required to accommodate wheelchair users.

8. COMPUTATION OF ACCESSIBLE UNITS

In the computation for the allocation of accessible units and seating capacity decimal greater than 0.5 shall be considered as one unit. In all cases a minimum of one (1) accessible unit shall be provided.

## 9. APPLICATION OF BARRIER-FREE FACILITIES AND FEATURES

- 9.1 Graphic signs shall be bold and conspicuously installed in every access from point of entry to connecting destination.
- 9.2 Walkways shall be provided with adequate passageway in accordance with the provision illustrated in Rule II.
- 9.3 Width of corridors and circulation system integrating both horizontal and vertical access to ingress/egress level of the building shall be provided.
- 9.4 Doors and entrances provided herein used as entry points at entrance lobbies as local points of congregation shall be designed to open easily or accessible from floor to floor or to any point of destination.
- 9.5 washroom and toilets shall be accessible and provided with adequate turning space (see Sec. 2.5 of Rule II).
- 9.6 Whenever elevator/s is required it should meet the requirements provided in Section 2.6 of Rule II.
- 9.7 Ramps shall be provided as means of access to level of change going to entry points and entrances of lobbies influenced by condition of location or use.
- 9.8 Parking areas shall be provided with sufficient space for the disabled persons to allow easy transfer from carpark to ingree/egress levels. 9.9 Height above the floor of switches and controls shall be in accordance with the provisions of Sec. 2.9, Rule II.
- 9.10 Handrails shall be provided at both sides of ramps in accordance with Sec. 2.10 of Rule II.
- 9.11 Floors provided for every route of the wheelchair shall be made of non-skid material.
- 9.12 Water fountains shall be installed as required and as provided in Sec. 2.13 of Rule II.

## RULE IV - REQUIREMENTS FOR PUBLIC TRANSPORTATION

### 1. Classification of public conveyances by mode of transport shall be as follows:

- 1.1 Land Transportation - This shall refer to buses having a minimum seating capacity of 50 persons for regular buses and 40 persons for airconditioned buses. This shall include

regular city buses, regular provincial buses, air-conditioned city buses (Love Bus and Pag-ibig Bus) and air-conditioned tourist and provincial buses.

- 1.2 Rail Transportation - This shall refer to the three railway systems in the country, the Philippine National Railways (PNR) operating in the island of Panay and the Light Rail Transit Authority (LRTA) operating in Metro Manila.
- 1.3 Water Transportation - This shall refer to domestic passenger ships, ferry boats and other passenger-carrying water transportation.
- 1.4 Air Transportation - This shall refer to the domestic passenger airplanes.
2. No franchise or permit to operate public transportation units shall be granted, issued or renewed unless such units are constructed or renovated in accordance with the requirements.
3. If feasible, all owners or operators of existing public transport utilities shall modify or renovate their units to accommodate disabled persons.
4. The construction or renovation of public transport utilities covered by these rules shall be subject to compliance with the body designs and specifications as provided under existing rules and regulations.
5. Posters or stickers shall be conspicuously displayed inside the units. (see Annex C - 1 Figure 1).
6. Public transportation shall have designated seats for disabled persons.
  - 6.1 Regular buses shall have at least five (5) designated seats for disabled persons near exit/entrance doors (see Annex C - 2 Figure 2 and 3 and Annex C - 3 Figure 4).
  - 6.2 First class, premiere and air-conditioned buses shall have at least four (4) designated seats for disabled persons near the door.
  - 6.3 Passenger trains shall have at least six (6) designated seats for disabled persons (see Annex C - 4 figure 7).
  - 6.4 Passenger airplanes shall have at least two (2) designated seats for disabled persons near the front exit/entrance door (see Annex c - 4 Figure 6).
  - 6.5 For regular city buses, other passengers may use these designated seats if not occupied and yield them to incoming disabled persons whenever the occasion arises.
  - 6.6 For provincial buses, air-conditioned buses, passenger trains and airplanes the designated seats for disabled persons may be occupied by other passengers only if no disabled persons shall occupy these seats at the start of the trip.
  - 6.7 Jeepneys shall have at least two (2) seats preferably the front seats as designated seats for disabled persons.

- 6.8 For jeepneys, other passengers may use these designated seats if not occupied and yield them to incoming disabled passengers only if the yielding passenger can still be accommodated at the back.
- 6.9 In domestic shipping, each vessel shall:
- a. Allocate on a per class-basis, areas for disabled passengers. These areas shall be nearest to the entrance and/or exit doorways of the vessels.
  - b. Give priority to disabled passengers embarkation and disembarkation through the assignment of "time windows". Disabled passengers shall be given a twenty (20) minute period to embark ahead of the three (3) hour embarkation time prior to the ship's departure; and shall be allocated a maximum of one (1) hour for disembarkation after the ship's arrival.
7. The designated seats shall be identified by the International Symbol of Access.
8. Owners or operators of city buses operating in highly urbanized cities shall install in their units audiovisual aids such as buzzer, bell, flashing light to inform the driver of any alighting passenger.
9. At least one deck in passenger ships shall be provided with accessible ramps, passageways, access to gangways, galleys, safety equipment and bunks/berths/cabins with dimensions conforming with the requirements as provided in rule II.

## RULE V - ADMINISTRATION AND ENFORCEMENT

### 1. *Responsibility for Administration and Enforcement*

The administration and enforcement of the provision of these Rules and Regulations shall be vested in the Secretary of Public Works and Highways and the Secretary of Transportation and Communications, in accordance with the functions and jurisdiction of their respective Departments as provided for by laws as follows.

1.1 The Secretary through the Heads of attached agencies of the Department of Public Works and Highways, with the technical assistance of the Building Research Development Staff, shall administer and enforce the provisions of these Rules and Regulations through the City/Municipal Engineer who shall also act as Local Building Official pursuant to Section 477 of R.A. 7160, otherwise known as the Local Government Code of 1991 and as applied to the following:

1.1.1 Buildings and related structures including public transport terminals

1.1.2 Streets and Highways

1.2 The Secretary of Transportation and Communications shall administer and enforce the provisions of these Rules and Regulations through the Heads of Line and Attached Agencies of the Department as follows:

1.2.1 Land Transportation Franchising and Regulatory Board - In respect to the issuance of Certificate of Public Convenience (CPC) and Provisional Authority (PA) for the operation of public road Transportation utilities or services.

1.2.2 Land Transportation Office - In respect to the registration of buses and jeepneys and enforcement of regulations related to land transport.

1.2.3 Philippine National Railways and the Light Rail Transit Authority - For the operation of passenger trains and including stations and terminals.

1.2.4 Maritime Industry Authority - In respect to the development, promotion, and regulation of all enterprises engaged in business of designing, constructing, manufacturing, acquiring, operating, supplying, repairing and/or maintaining vessels or components thereof; or managing and/or operating shipping lines, shipyards, dry docks, marine railways, marine repair shops, shipping and freight forwarding agencies and similar enterprises; issuance of license to all water transport vessels.

1.2.5 Philippine Ports Authority - in respect to the planning, development, financing, construction, maintenance and operation of ports, port facilities, port physical plants, and all equipment used in connection with the operation of a port.

1.2.6 Civil Aeronautics Board - In respect to the supervision and regulation of the jurisdiction and control over air carriers, general sales agents, cargo sales agents and air freight forwarders, and issuance of certificates/licenses to aircrafts.

1.2.7 Air Transportation Office - In respect to the maintenance, operations and development of all government airports (other than the NAIA, Mactan International Airport) as well as air navigation facilities (excluding meteorology).

## 2. Criminal Liability

As stipulated in Section 46 of R.A. 7277, otherwise known as the Magna Carta for Disabled Persons (a), any person who violates any provision of the rules and regulations of this Act shall suffer the following penalties:

- 1) for the first violation, a fine of not less than Fifty thousand pesos (P50,000.00) but not exceeding One hundred thousand pesos (P100,000.00) or imprisonment of not less than six (6) months but not more than two (2) years, or both at the discretion of the court; and
- 2) for any subsequent violation, a fine of not less than One hundred thousand pesos (P100,000.00) but not exceeding Two hundred thousand pesos (P200,000.00) or

imprisonment for not less than two (2) years but not more than six (6) years, or both at the discretion of the court.

- b) Any person who abuses the privileges granted herein shall be punished with imprisonment of not less than six (6) months or a fine of not less than Five thousand pesos (P5,000.00) but not more than Fifty thousand pesos (P50,000.00), or both, at the discretion of the court.
- c) If the violator is a corporation, organization or any similar entity, the officials thereof directly involved shall be liable therefor.
- d) If the violator is an alien or a foreigner, he shall be deported immediately after service of sentence without further deportation proceedings.

#### EFFECTIVITY

These Rules shall take effect thirty (30) days after the date of publication in the Official Gazette.  
Promulgated by:

(Sgd.) JESUS B. GARCIA, JR.  
Secretary  
Department of Transportation and Communications

(Sgd.) JOSE P. DE JESUS  
Secretary  
Department of Public Works and Highways

#### IN COORDINATION WITH:

The NATIONAL COUNCIL FOR THE WELFARE OF DISABLED PERSONS

BY:

(Sgd.) CORAZON ALMA G. DE LEON  
Chairman

PERSONS/INDIVIDUALS LIABLE  
FOR ANY VIOLATION OF THE ACT

For Buildings/Establishment/Structure

1. Owner or Operator of the Building, Establishment or Structure
2. Contractor
3. Architect
4. Engineer

5. Building Officials or Other Public Officials in-charge with the issuance of building permit, registration, certification and/or inspection of the building, establishment or structure.

For Air, Land and Sea Transportation.

1. Owner/Operator of Public Transportation
  2. Body Builders
  3. Safety Officers/Engineers/managers
  4. Drivers/Conductors/Conductresses
  5. Public Official in-charge with the issuance of permits, registration, certification and inspection of the public transportation.
- 

## ANNEX "A"

### DEFINITION OF TERMS AS USED IN THESE RULES AND REGULATIONS

1. **ACCESSIBLE** - refers to features that enable disabled persons to make use of the primary functions for which a structure is built.
2. **ALCOVE** - a small recessed space in a room or wall.
3. **ANTHROPOMETRIC** - pertaining to the measurement of the human body.
4. **BARRIER-FREE** - unhindered, without obstructions to enable disabled persons free passage or use of the facilities.
5. **BUILDINGS** - public and private buildings and other related structures for public use. Those designed to accommodate and serve persons in the pursuit of educational, commercial, recreational, religious, occupational, medical, political, social activities and others of similar nature as enumerated and provided herein.
6. **CORRIDOR** - a long interior passageway providing access to several rooms.  
  
A public means of access from several rooms or spaces to an exit.
7. **CURB** - a raised rim of concrete, stone or metal which forms the edge of street, sidewalk, planted area, etc.
8. **CURB-CUT-OUT** - a break in the sidewalk of traffic island provided with an inclined surface to facilitate mobility of wheeled chairs, carriages and other similar conveyance.
9. **DISABLED PERSONS** - those suffering from restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being as a result of a mental, physical or sensory impairment.

10. DOOR - an entranceway. A barrier which swings, slides, tilts or folds to close an opening in a wall or cabinet or the like.
11. EGRESS - an exit, or a means of going out.
12. ELEVATOR - a hoisting and lowering mechanism equipped with a car or platform which moves in guides, in a vertical direction serving two or more floors of a building or structure.
13. ENTRANCE - point of entry into a building: an exterior door, vestibule, or a lobby.
14. FLOOR - the surface within a room or area on which one walks.
15. GRADIENT OF RAMP - the degree of inclination of the sloped surface expressed as a percentage or ratio.
16. GRAPHIC SIGN - a drawing, painting, diagram, engraving, etching or other similar illustrations which from a single glance conveys a given message; a visual aid.
17. HANDRAIL - a hand support along a stairway or ramp consisting of rails and their supporting posts, balusters or pillars and constituting an enclosure or a line of division.
18. HEIGHT ABOVE FLOOR - distance between two points aligned vertically with one of the points on the floor.
19. PARKING AREA - allocated space composed of marked-off portions for single motor vehicles on a short-time storage basis.
20. PASSAGEWAY OR PASSAGE - a space connecting one area or room of a building with another.
21. PEDESTRIAN CROSSING - a part of road where pedestrian going across the road have priority over traffic.
22. PUBLIC TELEPHONES - a shelf-unit telephone with coin operating functions for the use of the public.
23. RAMP - a sloped surface connecting two or more planes at different levels.
24. SIDEWALK - a paved footwalk at the side of a street or roadway.
25. THRESHOLD - a strip fastened to the floor beneath a door, usually required to cover the joint where two types of floor materials meet; may provide weather protection at exterior doors.
26. TOILET - the room containing the water closet.
27. VESTIBULE - a small entranceway or transitional space from the exterior to the interior of a building and opens into a larger space.

- 28. WALKWAY - an exterior passage for walking along, especially one connecting adjoining buildings and related structures.
- 29. WASHROOM - a room providing facilities for washing, a lavatory or toilet room.
- 30. WATER FOUNTAIN - a fixture consisting of a shallow basin, together with a water jet designed to provide portable water for human consumption.
- 31. WIDTH OF CORRIDOR - the linear width of the obstructed path in corridors.

Appendix A -

Minimum Requirements for Accessibility .....  
Illustrations for Minimum Requirements .....

A. OUTSIDE AND AROUND BUILDINGS

1. DROPPED CURBS

- 1.1 Changes in level walkways should be by a dropped curb.
- 1.2 Dropped curbs should be provided at pedestrian crossings and at the end of walkways of a private street or access road.
- 1.3 Dropped curbs at crossings have a width corresponding to the width of the crossings; otherwise, the minimum width is 0.90 m.
- 1.4 Dropped curbs shall be ramped towards adjoining curbs with a gradient not more than 1:12.
- 1.5 Dropped curbs shall be sloped towards the road with a maximum cross gradient of 1:20 to prevent water from collecting at the walkway.
- 1.6 The lowest point of a dropped curb should not exceed 25 mm from the road or gutter.

2. DROPPED CUT-OUTS

- 2.1 Curb cut-outs should only be allowed when it will not obstruct a walkway or in any way lessen the width of a walkway.
- 2.2 The minimum width of a curb cut-out should be 0.90 M.
- 2.3 Curb cut-outs should have a gradient not more than 1:12.

3. WALKWAYS AND PASSAGEWAYS

- 3.1 Walkways should be kept as level as possible and provided with slip-resistant material.
- 3.2 Whenever and wherever possible, walkways should have a gradient no more than 1:20 or 5%.
- 3.3 Walkways should have a maximum cross gradient of 1:100.
- 3.4 Walkways should have a minimum width of 1.20 meters.
- 3.5 If possible, gratings should never be located along walkways. When occurring along walkways, grating openings should have a maximum dimension of 13 mm x 13 mm and shall not project more than 6.5 mm above the level of the walkway.
- 3.6 Walkways should have a continuing surface without abrupt pitches in angle or interruptions by cracks or breaks creating edges above 6.50 mm.
- 3.7 In lengthy or busy walkways, spaces should be provided at some point along the route so that a wheelchair may pass another or turn around. These spaces should have a minimum dimension of 1.50 m and should be spaced at a maximum distance of 12:00 m between stops.
- 3.8 To guide the blind, walkways should as much as possible follow straightforward routes with right angle turns.
- 3.9 Where planting is provided adjacent to the walkway, regular maintenance is essential to ensure branches of trees or shrubs do not overhang walkways or paths, as not only do these present a particular danger to the blind, but they also reduce the effective footways width available to pedestrians generally.
- 3.10 Walkway headroom should not be less than 2.0 m and preferably higher.
- 3.11 Passageways for the disabled should not be obstructed by street furniture, bollards, sign posts or columns along the defined route, as they can be hazardous.

#### 4. HANDRAILS

- 4.1 Handrails should be installed at both sides of ramps and stairs and at the outer edges of dropped curbs. Handrails at dropped curbs should not be installed beyond the width of any crossing so as not to obstruct pedestrian flow.
- 4.2 Handrails shall be installed at 0.90 m and 0.70 m above steps or ramps. Handrails for protection at great heights may be installed at 1.0 m to 1.06 m.
- 4.3 30 m long extension of the handrail should be provided at the start and end of ramps and stairs.

- 4.4 Handrails that require full grip should have a dimension of 30 mm to 50 mm.
- 4.5 Handrails attached to walls should have a clearance no less than 50 mm from the wall. Handrails on ledges should have a clearance not less than 40 mm.

## 5. OPEN SPACES

- 5.1 Where open spaces are provided, the blind can become particularly disoriented. therefore, it is extremely helpful if any walkway or paths can be given defined edges either by the use of planters with dwarf walls, or a grass verge, or similar, which provides a texture different from the path.

## 6. SIGNAGES

- 6.1 Directional and informational sign should be located at points conveniently seen even by a person on a wheelchair and those with visual impairments;
- 6.2 Signs should be kept simple and easy to understand; signages should be made of contrasting colors and contrasting gray matter to make detection and reading easy;
- 6.3 The international symbol for access should be used to designate routes and facilities that are accessible;
- 6.4 Should a sign protrude into a walkway or route, a minimum headroom of 2.0 meters should be provided;
- 6.5 Signs on walls and doors should be located at a maximum height of 1.60 M. and a minimum height of 1.40 meters. For signage on washroom doors, see C. Section 8.6.
- 6.6 Signages labeling public rooms and places should have raised symbols, letters or numbers with minimum height of 1 mm; brails symbols should be included in signs indicating public places and safety routes;

## 7. CROSSINGS

- 7.1 In order to reduce the exposure time to vehicular traffic, all at grade crossing should
  - 7.1.1 Be as near perpendicular to the carriageway as possible.
  - 7.1.2 Be located at the narrowest, most convenient part of the carriageway.
  - 7.1.3 Have central refuges of at least 1.5 m in depth and preferably 2 m, provided as a midcrossing shelter, where the width of carriageway to be crossed exceeds 10 m.

- 7.2 All crossings should be located close if not contiguous with the normal pedestrian desire line.
- 7.3 Provide tactile blocks in the immediate vicinity of crossings as an aid to the blind. The tactile surface has to be sufficiently high enough to be felt through the sole of the shoe but low enough not to cause pedestrian to trip, or to effect the mobility of wheelchair users. See details of recommended pairing slabs below.

Note. Tactile strips formed from brushed or grooved concrete finishes have not been proven successful as they do not provide sufficient distinction from the normal footway surface and therefore should not be used.

- 7.4 The most beneficial form of crossing as far as any disabled are concerned is the light controlled crossing having pedestrian phases and synchronized audiboe signals and should, wherever possible be provided in preference to other types of crossings as determined by the duly authorized agency.
- 7.5 The audible signal used for crossings should be easily distinguishable from other sounds in the environment to prevent confusion to the blind. A prolonged sound should be audible to warn the blind that the lights are about to change. (Design of such a system shall be developed by the Traffic engineering Center.)
- 7.6 The flashing green period required for the disabled should be determined on the basis of a walking speed of 0.90 m/sec. rather than 1.20 m/sec. which is what is normally used. The minimum period for the steady green (for pedestrians) should not be less than 6 seconds or the crossing distance times 0.90 m/sec., whichever is the greatest.

## B. PARKING

### 1. PARKING AREAS

- 1.1 Parking spaces for the disabled should allow enough space for a person to transfer to a wheelchair from a vehicle;
- 1.2 Accessible parking spaces should be located as close as possible to building entrances or to accessible entrances;
- 1.3 Whenever and wherever possible, accessible parking spaces should be perpendicular or to an angle to the road or circulation aisles;
- 1.4 Accessible parking slots should have a minimum width of 3.70 m;
- 1.5 A walkway from accessible spaces of 1.20 m. clear width shall be provided between the front ends of parked cars;
- 1.6 Provide dropped durbs or curb cut-outs to the parking level where access walkways are raised;

- 1.7 Pavement markings, signs or other means shall be provided to delineate parking spaces for the handicapped;
- 1.8 Parking spaces for the disabled should never be located at ramped or sloping areas;

## C. INSIDE BUILDINGS AND STRUCTURES

### 1. ENTRANCES

- 1.1 Entrances should be accessible from arrival and departure points to the interior lobby;
- 1.2 One (1) entrances level should be provided where elevators are accessible;
- 1.3 In case entrances are not on the same level of the site arrival grade, ramps should be provided as access to the entrance level;
- 1.4 Entrances with vestibules shall be provided a level area with at least a 1.80 m. depth and a 1.50 m. width;

### 2. RAMPS

- 2.1 Changes in level require a ramp except when served by a dropped curb, an elevator or other mechanical device;
- 2.2 Ramps shall have a minimum clear width of 1.20 m;
- 2.3 The maximum gradient shall be 1:12;
- 2.4 The length of a ramp should not exceed 6.00 m. if the gradient is 1:12; longer ramps whose gradient is 1:12 shall be provided with landings not less than 1.50 m;
- 2.5 A level area not less than 1.80 m. should be provided at the top and bottom of any ramp;
- 2.6 Handrails will be provided on both sides of the ramp at 0.70 m. and 0.90 m. from the ramp level;
- 2.7 Ramps shall be equipped with curbs on both sides with a minimum height of 0.10 m.;

- 2.8 Any ramp with a rise greater than 0.20 m. and leads down towards an area where vehicular traffic is possible, should have a railing across the full width of its lower end, not less than 1.80 meters from the foot of the ramp;

### 3. DOORS

- 3.1 All doors shall have a minimum clear width of 0.80 m;
- 3.2 Clear openings shall be measured between the surface of the fully open door at the hinge and the door jamb at the stop;
- 3.3 Doors should be operable by a pressure or force not more than 4.0 kg; the closing device pressure on an interior door shall not exceed 1 kg.;
- 3.4 A minimum clear level space of 1.50 m x 1.50 m shall be provided before and extending beyond a door; EXCEPT: where a door shall open onto but not into a corridor, the required clear, level space on the corridor side of the door may be a minimum of 1.20 m corridor width;
- 3.5 Protection should be provided from doors that swing into corridors;
- 3.6 Outswinging doors should be provided at storage rooms, closets and accessible restroom stalls;
- 3.7 Latching or non-latching hardware should not require wrist action or fine finger manipulation;
- 3.8 Doorknobs and other hardware should be located between 0.82 m. and 1.05 m. above the floor; 0.90 is preferred;
- 3.9 Vertical pull handles, centered at 1.06 m. above the floor, are preferred to horizontal pull bars for swing doors or doors with locking devices;
- 3.10 Doors along major circulation routes should be provided with kick plates made of durable material at a height of 0.30 m to 0.40 m;

### 4. THRESHOLDS

- 4.1 Thresholds shall be kept to a minimum; whenever necessary, thresholds and sliding door tracks shall have a maximum height of 25 mm and preferably ramped;

### 5. SWITCHES

- 5.1 Manual switches shall be positioned within 1.20 m to 1.30 m above the floor;
- 5.2 Manual switches should be located no further than 0.20 m from the latch side of the door;

## 6. SIGNAGES

(See "SIGNAGES" under OUTSIDE & AROUND BUILDINGS.)

## 7. CORRIDORS

- 7.1 Corridors shall have a minimum clear width of 1.20 m; waiting areas and other facilities or spaces shall not obstruct the minimum clearance requirement;
- 7.2 Recesses or turnabout spaces should be provided for wheelchairs to turn around or to enable another wheelchair to pass; these spaces shall have a minimum area of 1.50 m x 1.50 m. and shall be spaced at a maximum of 12.00 m.;
- 7.3 Turnabout spaces should also be provided at or within 3.50 m. of every dead end;
- 7.4 As in walkways, corridors should be maintained level and provided with a slip-resistant surface;

## 8. WASHROOMS & TOILETS

- 8.1 Accessible public washrooms and toilets shall permit easy passage of a wheelchair and allow the occupant to enter a stall, close the door and transfer to the water closet from either a frontal or lateral position;
- 8.2 Accessible water closet stalls shall have a minimum area of 1.70 x 1.80 mts. One movable grab bar and one fixed to the adjacent wall shall be installed at the accessible water closet stall for lateral mounting; fixed grab bars on both sides of the wall shall be installed for stalls for frontal mounting;
- 8.3 A turning space of 2.25 sq.m. with a minimum dimension of 1.50 m. for wheelchairs shall be provided for water closet stalls for lateral mounting;
- 8.4 All accessible public toilets shall have accessories such as mirrors, paper dispensers, towel racks and fittings such as faucets mounted at heights reachable by a person in a wheelchair;
- 8.5 The minimum number of accessible water closets on each floor level or on that part of a floor accessible to the disabled shall be one (1) where the total number of water closets per set on that level is 20; and two (2) where the number of water closets exceed 20;
- 8.6 In order to aid visually impaired persons to readily determine whether a washroom is for men or for women, the signage for men's washroom door shall be an equilateral triangle with a vertex pointing upward, and those for women shall be a circle; the edges of the triangle should 0.30 m long as should be the diameter of the circle; these signages should at least be 7.5 mm thick; the color and gray value of these geometric forms should be distinct from the color and gray value of the

doors; the words "men" and "women" or the appropriate stick figures should still appear on the washroom doors for the convenience of the fully sighted;

Note: the totally blind could touch the edge of the signs and easily determine whether it is straight or curved;

- 8.7 The maximum height of water closets should be 0.45 m; flush control should have a maximum height of 1.20 mts.
- 8.8 Maximum height of lavatories should be 0.80 m. with a knee recess of 0.60 - 0.70 M. vertical clearance and a 0.50 m. depth.
- 8.9 Urinals should have an elongated lip or through type; the maximum height of the lip should be 0.48 m.

## 9. STAIRS

- 9.1 Tread surface should be a slip-resistant material; nosings may be provided with slip resistant strips to further minimize slipping;
- 9.2 Slanted nosings are preferred to projecting nosings so as not to pose difficulty for people using crutches or braces whose feet have a tendency to get caught in the recessed space or projecting nosings. For the same reason, open stringers should be avoided.

## 10. ELEVATORS

- 10.1 Accessible elevators should be located not more than 30.00 m. from the entrance and should be easy to locate with the aid of signs;
- 10.2 Accessible elevators shall have a minimum dimension of 1.10 m. x 1.40 m.;
- 10.3 Control panels and emergency system of accessible elevators shall be within reach of a seated person; centerline heights from the topmost buttons shall be between 0.90 m to 1.20 m from the floor;
- 10.4 Button controls shall be provided with braille signs to indicate floor level; at each floor, at the door frames of elevator doors, braille-type signs shall be placed so that blind persons can be able to discern what floor the elevator car has stopped and from what level they are embarking from; for installation heights, see Section 6.6, Signages;
- 10.5 Button sizes at elevator control panels shall have a minimum diameter of 20 mm and should have a maximum depression depth of 1 mm;

## C. SAFETY

### 1. FENCING FOR ROADWORKS AND FOOTWORKS

All excavations, whether on the road or footway must be adequately protected, i.e. fenced. Whatever the type of fencing used, it is important the railings should incorporate the following features.

- 1.1 The height of the top of the rail should be at least 1.00 M. above the adjacent surface.
- 1.2 The railing should incorporate a tapping rail to assist the blind, and this should not be greater than 0.35 M. above adjacent surface.
- 1.3 The fence should be strong enough to offer resistance should a blind person walk into it.
- 1.4 Gaps should not occur between adjoining fence lengths.

## 2. COVERS FOR EXCAVATIONS

- 2.1 Excavations in the footway or carriageway where pedestrians may walk are covered over temporarily with properly constructed and supported boards to provide a temporary path for pedestrians.
- 2.2 If the footway width will be reduced to less than 1.20 because of the excavation, the temporary covering should extend across the whole of the footway.

### 2.3 Minimum dimensions at obstructions

- 2.3.1 Effective width of footways past any obstruction should not be less than 1.20 M.
- 2.3.2 If unavoidable, loose materials temporarily stored on footways must be properly fenced and prevented from encroaching onto the main footway by the use of kickboard at least 0.20 M. high which will also serve as a tapping board for the blind.

## 3. SIGNAGE FOR ROADWORKS ON THE CARRIAGEWAY

- 3.1 Temporary signs used to warn of roadworks should be carefully located and should not cause any inconveniences to pedestrians, particularly the disabled.
  - 3.1.1 Signs should be located on verges or similar whenever these are available.
  - 3.1.2 Signs should not reduce the available footway width to less than 1.20 M..

## 4. LOCATION OF EMERGENCY EXIT

- 4.1 Wall mounted or free standing tablets with an embossed plan configuration of the building which also shows the location of the lobby, washrooms and emergency

exits of the building (indicated by different textures with corresponding meanings) should be provided either in front of the building or at the main lobby. the markings of this tablet should be readable by both the fully sighted and the blind persons.

- 4.2 Flashing light directional signs indicating the location(s) of fire exit shall be provided at every change in direction with sufficient power provided in accordance with the provisions for emergency lighting under Section 3.410 of P.D. NO. 1185 (The Fire Code of the Philippines).

## 5. AUDIBLE AND VISIBLE ALARM SYSTEM

- 5.1 Audio-visual alarm systems shall be provided in all fire sections, as defined under P.D. NO. 1185 otherwise known as THE FIRE CODE OF THE PHILIPPINES, of buildings in accordance with the guidelines provided under Section 3.503 of the same.
- 5.2 For buildings of residential occupancies, i.e. Groups A and B, as defined under Section 701, of Chapter 7 of P.D. NO. 1096 otherwise known as the "The National Building Code of the Philippines", the provision of "VIBRA-ALARMS" for all occupants who are either deaf or hearing-impaired shall be compulsory.

## ILLUSTRATIONS FOR MINIMUM REQUIREMENTS

### A. OUTSIDE AND AROUND BUILDINGS

#### 1. DROPPED CURBS

- 1.1 Changes in level at walkways should be effected by slight ramps and dropped curbs;
- 1.2 Dropped curbs should be provided at pedestrian crossings and at the end of footpaths of a private street or access road;
- 1.3 Dropped curbs at crossings should have a length corresponding to the width of the crossing; otherwise, the minimum width should be 0.90 m.
- 1.4 Dropped curbs shall be ramped towards adjoining curbs with a gradient not more than 1:12;
- 1.5 Dropped curbs shall be sloped towards the road with a maximum cross gradient of 1:20 to prevent water from collecting at the walkway;
- 1.6 The lowest point of a dropped curb should not exceed 25 mm height above the road or gutter;

#### 2. CURB CUT-OUTS

- 2.1 Curb cut-outs should only be allowed when it will not obstruct a walkway or in any way lessen the width of a walkway;
- 2.2 The minimum width of a curb cut-out should be 0.90 m.;
- 2.3 Curb cut-out should not have a gradient not more than 1:12;

### 3. WALKWAYS

- 3.1 Walkways should be kept as level as possible and provided with slip-resistant material;
- 3.2 Whenever and wherever possible, walkways should have a gradient no more than 1:20 or 5%;
- 3.3 Walkways should have a maximum cross gradient of 1:100;
- 3.4 Walkways should have a minimum width of 1.20 meters;
- 3.5 If possible, gratings should never be located along walkways; when occurring along walkways, grating openings should have a maximum dimension of 13 mm x 13 mm and shall not project more than 6.5 mm above or below the level of the walkway;
- 3.6 Walkway should have a continuing surface without abrupt pitches in angle or interruptions by cracks or breaks creating edges above 6.5 mm.;
- 3.7 In lengthy or busy walkways, spaces should be provided at some point along the route so that a wheelchair may pass another or turn around; these spaces should have a minimum dimension of 1.5 meters and should be spaced at a maximum distance of 12.00 meters between stops;
- 3.8 To guide the blind, walkways should as much as possible follow straight-forward routes with right angle turns;
- 3.9 Where planting is provided adjacent to the walkway, regular maintenance is essential to ensure branches of trees or shrubs do not overhang walkways or paths, as they do not only present a particular danger to the blind, but they also reduce the effective footway width available to pedestrians;
- 3.10 Walkway headroom should be less than 2.00 m and should preferably be higher;
- 3.11 Passageways for the disabled should not be obstructed by street furniture, bollards, sign posts or columns along the defined route, as they can be hazardous;

### 4. HANDRAILS

- 4.1 Handrails should be installed at both sides of ramps and stairs and at the outer edges of dropped curbs at crossings; handrails should not be installed beyond the width of any crossing so as not to obstruct pedestrian flow;
- 4.2 Handrails shall be installed at 0.90 m and 0.70 m above steps or ramps; handrails for protection at great heights may be installed at 1.00 m to 1.06 m;
- 4.3 A 0.30 m long extension of the handrail should be provided at the start and end of ramps and stairs;
- 4.4 Handrails that require full grip should have a dimension of 30 cm to 50 cm;
- 4.5 Handrails attached to walls should have a clearance no less than 50 mm from the wall; handrails on ledges should have a clearance not less than 40 mm;

## 5. OPEN SPACES

- 5.1 Where open spaces are provided, the blind can become particularly disoriented. Therefore, it is extremely helpful if any walkway or paths can be given defined edges either by the use of planters with dwarf walls, or a grass verge, or similar, which provides a texture different from the path.

## 6. SIGNAGES

- 6.1 Directional and informational sign should be located at points conveniently seen even by a person on a wheelchair.;
- 6.2 Signs should be kept simple and easy to understand; signages should be made of contrasting colors and gray values to make detection and reading easy;
- 6.3 The international symbol for access should be used to designate routes and facilities that are accessible;

Sign	Size (cm)	Usage
A	10 x 10	Comfort room stall doors
A, B, C, D	15 X 15	With or without directional arrows to identify doors, rooms
A, B, C	22 X 22	With or without arrows
A, B, C, D, E	30 X 30	For exterior use
A, B, C, D, E	60 x 60	For exterior use
F	20 x 60	For exterior use

- 6.4 Should a sign protrude into a walkway or route, a minimum headroom of 2.00 meters should be provided; See Fig.
- 6.5 Signs on walls and doors should be located at a maximum height of 1.60 meters and a minimum height of 1.40 meters;

- 6.6 Signages labeling public rooms and places should have raised symbols, letters or numbers with a minimum height of 1 mm; Braille symbols should be included in signs indicating public places and safety routes;
- 6.7 Text on signboards shall be of a dimension that people with less than normal visual acuity can read at a certain distance.

## 7. CROSSINGS

- 7.1 In order to reduce the exposure time to vehicular traffic, all at grade crossings should;
  - 7.1.1 be as perpendicular as possible to the carriageway;
  - 7.1.2 be located at the narrowest, most convenient part of the carriageway;
  - 7.1.3 have central refuges of at least 1.50 m in depth and preferably 2.00 m, provided as a mid-crossing shelter, where the width of carriageway to be crossed exceeds 10.00 m;
- 7.2 All crossings should be located close if not contiguous with the normal pedestrian desire line;
- 7.3 Provide tactile blocks in the immediate vicinity of crossings as an aid to the blind; the tactile surface should be high enough to be felt by the sole of the shoe but low enough so as not to cause pedestrians to trip or to affect the mobility of wheelchair users;  
  
NOTE: tactile strips formed from brushed or grooved concrete have not proved successful as they do not provide sufficient distinction from the normal footway surface and therefore should not be used;
- 7.4 Light controlled crossings with pedestrian phases and audible signals are most beneficial to the disabled; they should be provided wherever possible;
- 7.5 The audible signals used for crossings should be easily distinguishable from other sounds in the environment to prevent confusion to the blind; a prolonged sound could serve as warning signal that the crossing time is about to end.
- 7.6 Sufficient time should be allowed for the slower persons negotiating a crossing; a walking speed of 0.90 m/sec. rather than 1.20 m/sec should be considered; a minimum crossing period of 6.0 seconds or the crossing distance time the crossing speed (0.90 m.sec), whichever is greater;

## B. PARKING

### 1. PARKING AREAS

- 1.1 Parking spaces for the disabled should allow enough space for a person to transfer to a wheelchair from a vehicle;
- 1.2 Accessible parking spaces should be located as close as possible to building entrances or to accessible entrances;
- 1.3 Whenever and wherever possible, accessible parking spaces should be perpendicular or at an angle to the road or circulation aisles;
- 1.4 Accessible parking slots should have a minimum width of 3.70 m.;
- 1.5 A walkway from accessible spaces of 1.20 m. clear width shall be provided between the front ends of parked cars;
- 1.6 Provide dropped curbs or curb cut-outs to the parking level where access walkways are raised;
- 1.7 Pavement markings, signs or other means shall be provided to delineate parking spaces for the handicapped;
- 1.8 Parking spaces for the disabled should never be located at ramped or sloping areas;

## C. INSIDE BUILDINGS AND STRUCTURES

### 1. ENTRANCES

- 1.1 At least one entrance to every building should be accessible from arrival and departure points to the interior lobby;
- 1.2 One (1) entrance level should be provided where elevators are accessible;
- 1.3 In case entrances are not on the same level of the site arrival grade, ramps should be provided as access to the entrance level;
- 1.4 Entrances with vestibules shall be provided a level area with at least a 1.80 m. depth and a 1.50 m. width;

### 2. RAMPS

- 2.1 Changes in level require a ramp except when served by a dropped curb, an elevator or other mechanical device;
- 2.2 Ramps shall have a minimum clear width of 1.20 m;

- 2.3 The maximum gradient shall be 1:12;
- 2.4 The length of a ramp should not exceed 6.00 m. if the gradient is 1:12 longer ramps whose gradient is 1:12 shall be provided with landings not less than 1.50 m.;
- 2.5 A level area not less than 1.80 m. should be provided at the top and bottom of any ramp;
- 2.6 Handrails will be provided on both sides of the ramp at 0.70 m. and 0.90 m. from the ramp level;
- 2.7 Ramps shall be equipped with curbs on both sides with a minimum height of 0.10 m.;
- 2.8 Any ramp with a rise greater than 0.20 m. and leads down towards an area where vehicular traffic is possible, should have a railing across the full width of its lower end, not less than 1.50 meters from the foot of the ramp;

### 3. DOORS

- 3.1 All doors shall have a minimum clear width of 0.80 m;
- 3.2 Clear openings shall be measured between the surface of the fully open door at the hinge and the door jamb of the stop;
- 3.3 Doors should be operable by a pressure or force not more than 4.0 kg; the closing device pressure an interior door shall not exceed 1 kg;
- 3.4 A minimum clear level space of 1.50 m x 1.50 m shall be provided before and extending beyond a door; EXCEPTION: where a door shall open onto but not into a corridor, the required clear, level space on the corridor side of the door may be a minimum of 1.20 m corridor width;
- 3.5 Protection should be provided from doors that swing into corridors;
- 3.6 Outswinging doors should be provided at storage rooms, closets and accessible restroom stalls;
- 3.7 Latching or non-latching, hardware should not require wrist action or fine finger manipulation;
- 3.8 Doorknobs and other hardware should be located between 0.82 m. and 1.06 m. above the floor; 0.90 is preferred;
- 3.9 Vertical pull handles, centered at 1.06 m. above the floor, are preferred to horizontal pull bars for swing doors or doors with locking devices;

- 3.10 Doors along major circulation routes should be provided with kick plates made of durable material at a height of 0.30 m to 0.40 m;

#### 4. THRESHOLDS

- 4.1 Thresholds shall be kept to a minimum; whenever necessary, thresholds and sliding door tracks shall have a maximum height of 25 mm and preferably ramped;

#### 5. SWITCHES

- 5.1 Manual switches shall be positioned within 1.20 m to 1.30 m above the floor;
- 5.2 Manual switches should be located no further than 0.20 from the latch side of the door;

#### 6. SIGNAGES

(See "SIGNAGES" under OUTSIDE & AROUND BUILDINGS)

#### 7. CORRIDORS

- 7.1 Corridors shall have a minimum clear width of 1.20 m.; waiting areas and other facilities or spaces shall not obstruct the minimum clearance requirement;
- 7.2 Recesses or turnabout spaces should be provided for wheelchairs to turn around or to enable another wheelchair to pass; these spaces shall have a minimum area of 1.50 m x 1.50 m. and shall be spaced at a maximum of 12.00 m.;
- 7.3 Turnabout spaces should also be provided at or within 3.50 m. of every dead end;
- 7.4 As in walkways, corridors should be maintained level and provided with a slip-resistant surface;

#### 8. WASHROOMS & TOILETS

- 8.1 Accessible public washrooms and toilets shall permit easy passage of a wheelchair and allow the occupant to enter a stall, close the door and transfer to the water closet from either a frontal or lateral position;
- 8.2 Accessible water closet stalls shall have a minimum area of 1.70 x 1.80 mts. One movable grab bar and one fixed to the adjacent wall shall be installed at the accessible water closet stall for lateral mounting; fixed grab bars on both sides of the wall shall be installed for stalls for frontal mounting;
- 8.3 A turning space of 2.25 sq. m. with a minimum dimension of 1.50 m. for wheelchairs shall be provided outside water closet stalls;

- 8.4 All accessible public toilets shall have accessories such as mirrors, paper dispensers, towel racks, and fittings such as faucets mounted at heights reachable by a person in a wheelchair;
- 8.5 The minimum number of accessible water closets on each floor level or on the part of a floor level accessible to the disabled shall be one (1) where the total number of water closets per sex on that level is 20; and two (2) where the number of water closets exceed 20;
- 8.6 In order to aid visually impaired persons to readily determine whether a washroom is for men or for women, the signage on men's washroom door shall be an equilateral triangle with a vertex pointing upward, and those for women shall be a circle; the edges of the triangle should be 0.30 m long as should be the diameter of the circle; these signages should at least be 7.5 mm thick; the door and gray value of the doors; the words "men" and "women" or the appropriate stick figures should still appear on the washroom doors for the convenience of the fully sighted; NOTE: the totally blind could touch the edge of signs and easily determine whether it is straight or curved;
- 8.7 The maximum height of water closets should be 0.45 m; flush control should have a maximum height of 1.20 m.;
- 8.8 Maximum height of lavatories should be 0.80 m with a knee recess of 0.60 - 0.70 m vertical clearance and a 0.50 m depth;
- 8.9 Urinals should have an elongated lip or should be through-type; the maximum height of the lip should be 0.48 m;

## 9. STAIRS

- 9.1 Tread surfaces should be of a slip-resistant material; nosings should be provided with slip-resistant strips to further minimize slippings;
- 9.2 Slanted nosings are preferred to protruding nosings so as not to impose difficulty for people using crutches or braces whose feet have a tendency to get caught in the recessed space of protruding nosings; for the same reason, open stringers should be avoided;
- 9.3 The leading edge of each step on both runner and riser should be marked with a paint or non-skid material that has a color or gray value which is in high contrast to the gray value of the rest of the stairs; markings of this sort would be helpful to the visually impaired as well as to the fully sighted person;
- 9.4 A tactile strip 0.30 m. wide shall be installed before hazardous areas such as sudden changes in floor levels and at the top and bottom of stairs; special care must be taken to ensure the proper mounting or adhesion of tactile strips so as not to cause accidents;

## 10. ELEVATORS

- 10.1 Accessible elevators should be located not more than 30.00 m. from the entrance and should be easy to locate with the aid of signs;
- 10.2 Accessible elevators shall have a minimum dimension of 1.10 m x 1.40 m;
- 10.3 Control panels and emergency systems of accessible elevators shall be within reach of a seated person; centerline heights for the topmost buttons shall be between 0.90 m to 1.20 m. from the floor;
- 10.4 Button controls shall be provided with braille signs to indicate floor level; at each floor, at the door frames of elevator doors, braille-type signs shall be placed so that blind persons can be able to discern what floor the elevator car has stopped and from what level they are embarking from; for installation heights, see Section 6.6 Signages;
- 10.5 Button sizes at elevator control panels shall have a minimum diameter of 20 mm and should have a maximum depression depth of 1 mm;

## 11. WATER FOUNTAINS

- 11.1 At least one (1) fountain shall be provided for every 2,000 sq. m. of floor area and there shall not be less than one (1) on each floor. Water spouts shall be at the front and shall be push-button controlled. If wall-mounted, the maximum height of the water fountain shall be 0.85 m. from the floor to the rim. Should the floor-mounted type be higher than 0.85 m. up to the rim, either provide paper cups or another lower fountain.

## 12. PUBLIC TELEPHONES

- 12.1 Provide a clear, unobstructed space of 1.50 m x 1.50 m in front of wall-mounted and free-standing units and telephones mounted at the rear wall of alcoves or recesses.
- 12.2 Telephone booth door openings should have a maximum clear width of 0.80 m. with either outswing, folding or sliding doors, coin slots, dialing controls, receivers and instructional signs shall be located at a maximum of 1.10 m. above the floor

## 13. PLACES OF ASSEMBLY

- 13.1 Number of seating accommodations reserved for wheelchair users shall be in accordance with Section 7 of Rule III.

## D. SAFETY

## 1. FENCING FOR ROADWORKS AND FOOTWORKS

All excavations, whether on the road or footway must be adequately protected or fenced-in to protect pedestrians in general and the disabled in particular. whatever the type of fencing used, it is important that the railings should incorporate the following features:

- 1.1 The height of the top of the rail should be at least 1.00 m above the adjacent surface;
- 1.2 The railing should incorporate a tapping rial to assist the blind; this should not be greater than 0.35 m above the adjacent surface;
- 1.3 The fence should be strong enough to offer resistance should a blind person walk into it;
- 1.4 Gaps should not occur between adjoining fence lengths;

## 2. COVERS FOR EXCAVATIONS

- 2.1 Excavations in the footway or carriageway where pedestrians may walk should be covered temporarily with properly constructed and supported boards to provide path for pedestrians;
- 2.2 If the footway width will be reduced to less than 1.20 m. because of the excavation, the temporary covering should extend across the whole footway;
- 2.3 Minimum dimensions at obstructions
  - 2.3.1 Effective width of footways past any obstruction should not be less than 1.20 m.
  - 2.3.2 If unavoidable, loose materials temporarily stored on footways must be properly fenced and prevented from enrouching onto the main footway by the use of a kickboard at least 0.20 m. high which may also serve as tapping board for the blind;

## 3. SIGNAGE FOR ROADWORKS ON THE CARRIAGEWAY

- 3.1 Temporary signs used to warn of roadworks should be carefully located and should not cause any invonvenience to pedestrians, particularly the disabled;
  - 3.1.1 Signs should be located on verges or similar whenever these are available;
  - 3.1.2 Signs should not reduce the available footway width to less than 1.20 m.;

## 4. LOCATION OF EMERGENCY EXITS

- 4.1 Wall mounted or free standing tablets with an embossed plan configuration of the building which would also indicate locations of lobbies, washrooms and emergency exits (though the use of different textures to symbolize the spaces) should be provided at the main lobby of each floor or other strategic locations; the markings on this tablet should be readable by both the blind and the fully sighted;
- 4.2 Flashing light directional signs indicating the location(s) of fire exits shall be provided at every change in direction with sufficient power provided in accordance with the provisions for emergency lighting under Section 3.410 of P.D. 1185 (The Fire Code of the Philippines);